

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from non-residents of North America until the expiration of ninety (90) days from August 1, 1927.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	30 years	10 years*	5 years
Associate Member	Qualified to direct work	25 years	6 years*	1 year
Junior	Qualified for sub-professional work	18 years†	2 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers			
Fellow	Contributor to the permanent funds of the Society			

* Graduation from a school of engineering of recognized reputation is equivalent to 2 years' active practice.

† Membership ceases at age of 32 unless transferred to higher grade.

LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this Preliminary List, Arranged Alphabetically.

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REDD, CARL L.	Peachburg, Ala.	241	TOLBERT, FRANCIS M.	Pueblo, Colo.	253
REED, OREN.	Fresno, Cal.	282	TOLER, GEORGE G.	Poteau, Okla.	284
REESE, GEORGE A.	Canton, Ohio.	241	TOMLINSON, CHARLES L.	Seattle, Wash.	253
RENN, RAYMOND W.	St. Bernard, Ohio.	241	TOWLE, FOSTER.	Quebradillas, P. R.	276
RICE, HAROLD G.	Rome, N. Y.	241	TRONOFF, THEODORE V.	Berkeley, Cal.	253
RICH, HAROLD J.	Sault Ste. Marie, Mich.	242	TROSPER, COURTNEY S.	Corbin, Ky.	284
RILEY, AUBIE H.	Atlanta, Ga.	242	TROST, LOUIS F.	Sapulpa, Okla.	254
RISLEY, WARNER I.	Atlantic City, N. J.	274	TROXELL, HAROLD C.	Albany, N. Y.	284
ROACH, ALDEN G.	Pasadena, Cal.	282	TSAI, FANG-YIN.	Cambridge, Mass.	254
ROBERTS, EARL I.	Toledo, Ohio.	242	TYNAN, JOHN W.	Arlington, Vt.	254
ROBERTS, MARVIN E.	Columbia, Tenn.	242	VALEGA, RAUL F.	New York City.	254
ROBERTS, STANLEY L.	Sarawak, Borneo.	242	VALLE ZENO, RAFAEL D.	San Juan, Porto Rico	254
ROBERTS, THOMAS K.	Greensboro, N. C.	243	VAN ALSTINE, ROY D.	Long Beach, Cal.	276
ROBERTS, WILLIAM H.	Rochester, N. Y.	243	VAN DE GREYN, MAX.	Roseville, Mich.	254
ROETMAN, EDMOND T.	Ames, Iowa.	243	VAN HULSTEYN, J. M. C.	New York City.	254
ROGERS, ALBERT W.	Sanchez, Dom. Rep.	282	VAN KLECK, LE ROY W.	Middletown, N. Y.	255
ROHWEDDER, HARRY R.	Mendon, Mo.	243	VAN ZYVERDEN, ALBERT.	Little Rock, Ark.	255
ROLLMAN, OTTO C.	Green Bay, Wis.	274	VELU, SADRAS S.	Burma, India.	255
ROWE, NORMAN L., 3d.	Jackson, Mich.	243	VICKERY, AL B.	Ft. Worth, Tex.	255
SAMMONS, JACK C.	Ft. Myers, Fla.	243	VINCENT, RUSSELL.	Seattle, Wash.	255
SANTELMAUN, ALFRED W.	Washington, D. C.	282	VON ABO, CECIL V.	Johannesburg, S. A.	284
SARAFIOGLOU, ANESTIS G.	Constantinople, Turkey	283	VOSTEEN, FRED H.	San Diego, Cal.	255
SCHAUFFLER, HENRY A.	Schenectady, N. Y.	243	WALLACE, ROBERT S.	Chicago, Ill.	255
SCHLOM, LOUIS H.	Houston, Tex.	283	WALTON, ALEXANDER Y.	San Antonio, Tex.	255
SCHMITT, HARRY A.	Chapel Hill, N. C.	244	WARD, ELLWOOD W.	Southboro, Mass.	255
SCHUYLER, PHILIP K.	Washington, D. C.	274	WARD, JOHN P.	Stuart, Fla.	255
SCHWEIM, HENRY J.	Chicago, Ill.	244	WARING, FREDERICK H.	Columbus, Ohio.	276
SCOTT, JOHN W.	Auburn, Cal.	244	WARREN, RAY.	Greenboro, N. C.	255
SCOTT, MAHLON D.	Upper Darby, Pa.	244	WATTS, JOSEPH C.	Oak Park, Ill.	257
SCOTT, ROBERT K.	Wilmington, N. C.	245	WEEKS, LUCAS A.	Springfield, Mo.	257
SEAMAN, AYLES C.	Brooklyn, N. Y.	245	WEINMAN, IRVING M.	New York City.	257
SEDGWICK, GEORGE A.	Oakland, Cal.	245	WELDEN, NEIL.	Chicago, Ill.	258
SEELY, GEORGE H.	Mt. Vernon, N. Y.	245	WESSENAUER, GABRIEL O.	Sewickley, Pa.	257
SHAPE, ROBERT L.	New York City.	245	WEST, BAIRD F.	Terre Haute, Ind.	257
SHAW, SAUL.	Newark, N. J.	245	WEST, MERRILL L.	Fayetteville, N. C.	257
SHENAMAN, IRVIN S.	Philadelphia, Pa.	246	WESTERHOFF, RUSSELL P.	Paterson, N. J.	257
SHIELDS, ARTHUR C.	Denver, Colo.	246	WHEELER, ROBERT M.	Nashville, Tenn.	258
SHOEMAKER, ROBERT C.	Philadelphia, Pa.	246	WHIPPLE, LEONARD S.	Bloomfield, N. J.	258
SHUTTS, ELMER E.	Lake Charles, La.	246	WHITE, BENJAMIN.	Boston, Mass.	258
SICKEL, HORACE B. A.	Columbus, Ohio.	247	WHYTE, CLIFFORD R.	Pittsburgh, Pa.	258
SKILLING, ARTHUR W.	Pittsburgh, Pa.	247	WIEDEMAN, HERMAN F.	Atlanta, Ga.	257
SLOAN, DAVID B.	Princeton, N. J.	247	WILKINSON, WILLIAM M.	Philadelphia, Pa.	258
SLOBODA, EDWARD.	Los Angeles, Cal.	247	WILLIAMS, HOWARD J.	Boston, Mass.	258
SMALL, GEORGE E.	Montclair, N. J.	247	WILLIER, THOMAS E.	Springfield, Mo.	258
SMILEY, PAUL E.	Dayton, Ohio.	248	WILLIS, CHARLES L., Jr.	Gary, Ind.	258
SMITH, CHARLES A.	New Haven, Conn.	248	WINKLER, EDWARD R., Jr.	Chambersburg, Pa.	258
SMITH, COLTON M., Jr.	Gulfport, Miss.	248	WITMER, JOHN D.	Lewistown, Pa.	258
SMITH, EDWARD D.	San Francisco, Cal.	248	WOLFF, ALLAN L.	New Orleans, La.	258
SMITH, KENNETH A.	Malba, N. Y.	248	WOLFSKILL, KENNETH B.	Oakland, Cal.	258
SMITH, RICHARD W.	Seattle, Wash.	248	WOOD, WILLIAM D.	Augusta, Mont.	258
SMITH, ROBERT J.	Chicago, Ill.	248	WOODBURY, WILLIAM M.	Birmingham, Ala.	258
SMITH, WALDO E.	Urbana, Ill.	248	WRIGHT, ALLEN V.	Macon, Ga.	258
SMYTHE, HAROLD E.	Suva, Fiji.	249	WRIGHT, AUSTIN R.	Fayetteville, N. C.	258
SOLER, GABRIEL.	Miramar, Porto Rico.	249	WRIGHT, CHILTON A.	Ithaca, N. Y.	258
SOWDEN, HERBERT J.	Philadelphia, Pa.	249	YALE, DAVID.	New York City.	277
SPAFFORD, HILDBRETH A.	Logan, W. Va.	249	YANG, PAO-LING.	Tientsin, China.	259
SPANN, WILLIAM M.	St. Joseph, Mo.	275	YOUNG, DONOVAN H.	Wenatchee, Wash.	259
SPEERT, JULIUS L.	Baltimore, Md.	249	ZEGLEN, RUDOLPH T.	Schenectady, N. Y.	259
SPESSARD, RICHARD H.	Greenville, S. C.	249	ZWANZIGER, DAVID M.	New York City.	259
SPRINGER, FREDERICK W.	Toronto, Ohio.	249			

The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The number in the center above each record indicates the serial number of the applicant for the current year, and that at the left the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of two years for graduation and of one-third of a year for each academic year successfully completed in an engineering college without graduation is included in Total Time and Sub-Professional Work.

FOR ADMISSION

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(7) ABBOTT, RUSSELL WARD, 710 East Ann St., Ann Arbor, Mich. (Age 23. Born Tecumseh, Mich.) A. B., Albion (Mich.) Coll. 1927 B. S. in C. E., Univ. of Mich. *TT* 2: *SP* 2. Sept. 1925 to Sept. 1926 with Michigan Bell Telephone Co., Detroit, Mich., until July 1926, as Commercial Engr., making surveys of numerous cities, then Supervisor. *TT* 1: *SP* 0.8: *P* 0.2. *TT* 3: *SP* 2.8: *P* 0.2. Refers to J. H. Cissel, L. M. Gram, W. C. Hoad, R. H. Sherlock, D. R. Wells.

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(12) ABELSON, OLE ANDREW, 2204 East Thirty-Fifth St., Tacoma, Wash. (Age 49. Born Melo Helgeland, Norway.) 1909 B. S. in C. E., and 1926 C. E., Wash. State Coll. *TT* 2: *SP* 2. July 1915-Dec. 1917 Steel and Reinforced Concrete Designer, Tacoma Smelting Co.; designed steel roof trusses with complicated loadings also two concrete bridges with brick smoke conduit (20 by 30 ft.), also trusses, cathode furnace building with brick stack 200 ft. high; assisted on design of foundation for main brick stack 571 ft. high. *TT* 2.5: *P* 2.5: *RC* 2.5: *D* 2. Jan. 1918 to May 1919 Reinforced Concrete Designer, Garfield (Utah) Smelting Co., had charge of design of sampling and bucking building (\$50 000), and of structural part of change house (\$20 000) (both reinforced concrete). *TT* 1.4: *P* 1.4: *RC* 1.4: *D* 1.4. June to Aug. 1919 Bridge Designer, Washington State Highway. *TT* 0.2: *P* 0.2: *RC* 0.2: *D* 0.2. Aug. 1919 to June 1923 Concrete Designer, Tacoma Water Dept.; made preliminary design of 185 000 000-gal. reservoir and connecting pipe layout, in charge of design and construction of hanging gunite flume (\$10 000); and of Water and Light Dept. Store Bldg. (reinforced concrete, \$100 000) and assisted on design of gunite collecting main (\$40 000). *TT* 3.8: *P* 3.8: *RC* 3.8: *D* 2. June 1923 to Oct. 1926 Asst. Engr. under Chf. Engr., Cushman Power Project, assisted on design of dam (275 ft. high), in charge of design and construction of power house building and appurtenances (\$350 000). *TT* 3.4: *P* 3.4: *RC* 3.4: *D* 1.4. Oct. 1926 to date Structural Engr. Tacoma Water Dept., designed garage (\$20 000) and spillway for North End Reservoir (\$40 000); assisted on design of North End Reservoir and 1 250 000-gal. stand-pipe; at present on large water-pipe replacements. *TT* 0.7: *P* 0.7: *RC* 0.7: *D* 0.6. *TT* 14: *SP* 2: *P* 12: *RC* 12: *D* 7.6. Refers to R. Hoffmark, L. R. Jorgensen, W. A. Kunick, W. J. Roberts, J. L. Stannard, B. E. Torpen, O. L. Waller.

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(10) ABERNETHY, PETER LINK, 1335 Thirtieth Ave., Hickory, N. C. (Age 23. Born Hickory, N. C.) 1927 B. S. in C. E., Univ. of N. C. *TT* 2: *SP* 2. Refers to G. M. Braune, H. F. Janda.

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(5) ADAIR, ARTHUR CHAPMAN, 1516 Columbia Rd., Washington, D. C. (Age 34. Born Lurich, Va.) Registered Civ. and Min. Engr., State of West Virginia; Certified Min. Engr., State of Virginia. Sept. 1912 to June 1913 student, Virginia Polytechnic Inst., 1920-1921 extension work, West Virginia Univ. *TT* 0.3: *SP* 0.3. June 1913 to Jan. 1916 Rodman and Instrumentman, Elk Horn Coal Corporation, Wayland, Ky. *TT* 2.5: *SP* 2.5. Jan. 1916 to

Aug. 1917 Asst. Engr., Carbon (W. Va.) Fuel Co., in charge of mine construction and development surveys, also Supt. of Constr. *TT 1.6: P 1.6: RC 1.* Jan. to July 1918 Min. Engr., Crystal Coal & Coke Co., and Thomas Coal Co., Crystal, W. Va., in charge of engineering, including instrument and map work of four producing mines. *TT 0.5: P 0.5: RC 0.5.* July 1918 to April 1919 with U. S. Army, as Private, Corporal and Sergeant. Commissioned First Lieut., Coast Artillery Reserves. *TT 0.8: SP 0.8.* April to July 1919 Chf. of Party, Central Pocahontas Coal Co., Welch, W. Va., topographical surveys and mine construction. *TT 0.2: P 0.2.* July 1919 to Feb. 1923 Chf. Engr., Peerless Coal & Coke Co., Vivian, W. Va., in charge of all engineering, mine surveys, projections, construction and operations. *TT 3.6: P 3.6: RC 3.6.* Feb. to Oct. 1923 Mine Engr., U. S. Coal & Coke Co., Gary, W. Va., reporting on coal lands, mine surveys, operation and development work. *TT 0.7: P 0.7: RC 0.7.* Oct. 1923 to date with Treasury Dept., Bureau of Internal Revenue, Eng. Div., Washington, D. C., until June 1925 as Associate Valuation Engr., and since then Valuation Engr., valuation of coal lands, consisting of field examinations, valuation of coal properties, etc. *TT 3.7: P 3.7: RC 3.7. TT 13.9: SP 3.6: P 10.3: RC 9.5.* Refers to F. Furlow, A. W. Gaumer, G. W. Hutchinson, F. K. Rader, J. M. Rayburn, A. Smith, S. A. Taylor.

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(7) ADAMS, RAY, 1105 Brookridge St., Ames, Iowa. (Age 23. Born Springhill, Kans.) 1927 B. S. in Civ. Eng., Kans. State Agri. Coll. Summer 1924 Rodman and Culvert Inspector, Jefferson County, Kans. June 1925 to June 1927 (vacations and spare time while student) with Kansas Eng. Co., Topeka, Kans., as Tracer, Detailer and some designing on highway bridges. *TT 2: SP 2.* Refers to L. E. Conrad, F. W. Epps, F. F. Frazier, M. W. Furr, L. V. White.

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(1) ALCOCK, FRANCIS WYNDHAM, Box 123, Bay Shore, N. Y. (Age 21. Born Bay Shore, N. Y.) 1927 C. E., Rens. Pol. Inst. Summer 1924 Student Trackman, Delaware & Hudson R. R., part of time acted as Rodman. Summer 1925 Electrical Helper, Long Island R. R., station wiring and lighting. Summer 1926 and at present with Robt. J. Bartley, Civ. Engr., Bay Shore, N. Y., surveying, drafting and computing. *TT 2: SP 2.* Refers to E. R. Cary, L. W. Clark, H. B. Compton, T. R. Lawson, W. W. Rousseau.

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(3) ANDERSON, ANDREW MATTHEW, 29 Gifford Ave., Poughkeepsie, N. Y. (Age 24. Born Poughkeepsie, N. Y.) 1927 B. S. in C. E., Union Coll. *TT 2: SP 2.* June 1920 to June 1921 Surveyor's Helper with O. A. D'Luhsch, Poughkeepsie, N. Y., acting as Rodman, Axeman, Tapeman, etc. *TT 1: SP 1.* June 1921 to Sept. 1923 and summers 1924-1926 with New York State Bureau of Highways, until June 1922 as Engr. Asst. acting as Rodman, Axeman, etc., and remainder of time, Jun. Asst. Engr., acting as Instrumentman, Tracer, Draftsman, Inspector, etc. Sept. 1925 to June 1926 and Sept. 1926 to date (while student) Asst. Engr. with W. W. Chadsey, Cons. Engr., Schenectady, designing, drafting, surveying, water supply and valuation. *TT 2.3: SP 2.3. TT 5.3: SP 5.3.* Refers to W. W. Chadsey, H. Miller, W. C. Taylor.

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(14) ANDERSON, ARVID ANTON, 15 East Twelfth St., Hutchinson, Kans. (Age 35. Born Lindsborg, Kans.) 1914 B. S. in C. E., and 1920 C. E., Kans. State Agri. Coll. *TT 2: SP 2.* Summer 1913 Inspector of highway bridge construction, Wabaunsee County, Kans. July 1914 to Sept. 1916 successively Chainman, Rodman and Transitman, and Jan. to March 1918 and Feb. to June 1919 Computer in Valuation Dept., Atchison, Topeka & Santa Fe Ry. Co. *TT 2.7: SP 2.2: P 0.5.* Sept. 1916 to Jan. 1917 in private practice, Drainage Dist. No. 3, Kansas, survey and plans. *TT 0.3: P 0.3: RC 0.3.* Jan. to Dec. 1917 Field Engr., The Empire Cos., in charge of preliminary survey and location of pipe and telephone lines in Kansas and Oklahoma. *TT 0.9: P 0.9: RC 0.9.* March 1918 to Feb. 1919 Ensign, U. S. Naval Reserve Force. June 1919 to May 1923 with Kansas Highway Comm., on highway and bridge construction, until April 1920 as Res. Engr. in Wyandotte County, Kans., then Div. Engr. supervising plans, design and construction. *TT 3.9: P 3.9: RC 3: D 0.9.* May 1923 to date Field Engr., Portland Cement Association, on design and control of concrete mixtures, construction aid and inspection of concrete structures. *TT 4: P 4: RC 2.5: D 1.5. TT 13.8: SP 4.2: P 9.6: RC 6.7: D 2.4.* Refers to W. V. Buck, L. E. Conrad, F. W. Epps, A. R. Losh, F. R. McMillan, S. Walker, M. W. Watson.

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(1) ANDUJAR, ANTHONY LEVERIDGE, 560 West 173d St., New York City. (Age 22. Born New York City.) 1927 B. S. in C. E., N. Y. Univ. *TT 2: SP 2.* Refers to E. G. Hooper, C. T. Schwarze.

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(6) **ARBENZ, HERMAN LEONARD**, National Road, Pleasant Valley, Wheeling, W. Va. (Age 53. Born Wheeling, W. Va.) 1895 C. E. Lehigh Univ. *TT 2: SP 2.* June 1895 to July 1899 Draftsman, Pittsburg Bridge Co.; Estimator, Shiffer Bridge Co.; Rodman, Levelman, Topographer, Map Draftsman, Instrumentman, Locating Engr., Northern Pacific Ry. *TT 4: P 4.* July 1899 to Jan. 1903 Asst. City Engr. and (6 months) Acting City Engr., Wheeling, W. Va. *TT 3.5: P 3.5: RC 0.5.* Jan. 1903 to Jan. 1909 Engr., Ohio County, W. Va. *TT 6: P 6: RC 6.* Jan. 1909 to July 1912 general engineering practice. *TT 3.5: P 3.5: RC 3.5: D 3.5.* July 1912 to March 1916 U. S. Senior Highway Engr., Office of Public Roads, U. S. Dept. of Agriculture, on location and construction of experimental roads, etc.; Lecturer and Demonstrator. *TT 3.8: P 3.8: RC 3.8: D 3.8.* April 1916 to Jan. 1925 in business. Jan. 1925 to date City Engr., Wheeling. *TT 2.5: P 2.5: RC 2.5.* *TT 25.3: SP 2: P 23.3: RC 16.3: D 7.3.* Refers to J. N. Chester, R. Hazlett, J. F. Laboon, W. O. McCluskey, Jr., V. M. Peirce, H. E. Snyder.

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(11) **ARCHIBALD, GEORGE BUTTLES**, 209 Pacific Bldg., San Diego, Cal. (Age 43. Born St. Paul, Minn.) 1905 Min. Engr., Univ. of Mont. *TT 2: SP 2.* June 1905 to March 1906 Min. Engr., Cable (Mont.) Consolidated Min. Co., surveying, stamp mill work, diamond drill exploration, placer and underground mining. *TT 0.8: P 0.8: RC 0.8: D 0.1.* March to Oct. 1906 Min. Engr., Amalgamated Copper Mfg. Co., Butte, Mont., underground surveying and mapping. *TT 0.6: P 0.6: RC 0.6.* Oct. 1906 to Dec. 1907 Min. Engr. and Asst. Supt., Butte & Bacom Copper Co., Butte, general engineering and supervision on large mining development involving 3 shafts, design of headworks, ore bins, etc. *TT 1.2: P 1.2: RC 1.2: D 0.6.* May 1909 to Aug. 1917 with Gen. Land Office, Dept. of Interior, 3 years as Mineral Inspector on mineral and geological investigations, reports and recommendations, then Carey Act Engr. on investigations, involving all classes of irrigation development. *TT 3.2: P 3.2: RC 3.2: D 5.* Aug. 1917 to Aug. 1918 Project Mgr., Jordan Valley Farms, Ore., on engineering and supervision of development of 80 000-acre irrigation project. *TT 1: P 1: RC 1: D 1.* Oct. 1918 to March 1921 and June 1922 to June 1923 Irrigation Engr., General Land Office, Dept. of Interior, investigations, reports and recommendations, involving approval of new projects, rebuilding and adjustment of old projects, checking designs, plans and details of development and construction, etc. *TT 3.4: P 3.4: RC 3.4: D 3.4.* March 1921 to June 1922 Asst. Commr. of Reclamation, State of Idaho, general supervision of work of Dept., construction, approval of designs and plans for irrigation and hydro-electric developments, etc. *TT 1.2: P 1.2: RC 1.2: D 1.2.* Sept. 1924 to Sept. 1925 Chf. of Party, Los Angeles County Flood Control, at Los Angeles, Cal., on location and construction of drains, dykes, etc. *TT 1: P 1: RC 1.* Jan. 1926 to date Asst. Engr. in Chg., Bureau of Water Development, San Diego, general supervision and design of pipe lines, conduits, dams, pumping plants, etc. At various times in private practice, promoting irrigation developments, etc. *TT 1.5: P 1.5: RC 1.5: D 1.5.* *TT 20.9: SP 2: P 18.9: RC 18.9: D 12.8.* Refers to G. C. Baldwin, C. R. Burky, E. H. Burroughs, Jr., E. B. Darlington, C. S. Heidel, T. A. Mills.

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(1) **ARNOLD, OSCAR ANDERSSSEN**, 450 Senator St., Brooklyn, N. Y. (Age 32. Born Bergen, Norway.) 1914 C. E., Bergens Tekniske Skole, Bergen, Norway. 1921 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Sept. 1914 to June 1915 Draftsman with E. O. Schou, Archt., Bergen, Norway. *TT 0.8: SP 0.8.* July 1915 to June 1919 Asst. Engr. with Erling Gjestland and G. E. Bonde, Cons. Engrs., Bergen, on design and report, investigation of hydro-electric development, office and field work, designing and supervising part of construction of superphosphate manufacturing plant (\$5 000 000). *TT 4: SP 0.5: P 3.5: RC 2: D 3.* 1919 to 1921 student, Massachusetts Inst. of Technology. July 1921 to June 1923 construction and estimating work. *TT 1: P 1.* July 1922 to Feb. 1923 with Electric Bond & Share Co., New York City, as Designer of hydro-electric plants and power-plant foundation. *TT 0.6: P 0.6: D 0.6.* Feb. 1923 to date Designer and Engr. of Design, International Paper Co., New York City, on power and manufacturing plants, etc. *TT 4.2: P 4.2: RC 2: D 4.2.* *TT 12.6: SP 3.3: P 9.3: RC 4: D 7.8.* Refers to A. P. Andersen, H. C. Borchgrevink, E. Hutchins, H. M. Nelson, G. S. Wood.

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(4) **AROYAN, HAGOP HAROOTUNE**, 40 Sunshine Road, Upper Darby, Pa. (Age 38. Born Aintab, Turkey.) 1915 M. C. E., Harvard Univ. *TT 2: SP 2.* Aug. 1915 to Aug. 1916 Cement Tester, Boston (Mass.) Transit Comm.; Inspector, Pennsylvania R. R., on Union Station foundations, Chicago, Ill.; Draftsman, American Bridge Co., Pittsburgh, Pa.; Draftsman, Stone & Webster Corporation, on Technology Bldgs., Cambridge, Mass. *TT 1: SP 1.* Aug. 1916 to Aug. 1917 Designer of fixed and movable bridges, with Ernest W. Wiggin, Cons.

Engr., New Haven, Conn. *TT 1: P 1: D 1.* Aug. 1917 to Nov. 1919 Capt., U. S. Army, survey, orientation, dugouts, heavy railroad artillery, Instructor, Adj. and Secy. for O. & T. C. T. A., No. 3, A. E. F., relief administration, transportation. *TT 2.2: SP 0.7: P 1.5: RC 1.5.* March 1920 to Feb. 1923 Vice-Pres., American Trading & Development Co., on survey and negotiations for water power and mining concessions in Caucasus. *TT 2.9: P 2.9: RC 2.9: D 0.8.* Feb. to Oct. 1923 housing, feeding, sanitation and evacuation of 20 000 refugees for Constantinople, H. H. Hatch, Mun. Engr., Springfield, Mass. *TT 0.7: P 0.7: RC 0.7.* Dec. 1923 to July 1924 on plans and specifications for houses, A. A. Kay, Philadelphia, Pa. *TT 0.7: P 0.7: RC 0.7: D 0.7.* Sept. 1924 to date Asst. Engr., Reading Co., Philadelphia, on design of bridges and structures. *TT 2.7: P 2.7: D 2. TT 13.2: SP 3.7: P 9.5: RC 5.8: D 4.* Refers to P. S. Baker, H. H. Hatch, R. J. Lawrence, F. J. Pitcher, E. W. Wiggin.

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(1) **AZPURUA-CAPRILES, FERNANDO**, Puerto Cabello, Venezuela. (Age 21. Born Puerto Cabello, Venezuela.) 1927 C. E., Lehigh Univ. *TT 2: SP 2.* Refers to R. J. Fogg. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(4) **BADER, EDWARD LAWRENCE, Jr.**, Virginia and Mediterranean Aves., Atlantic City, N. J. (Age 22. Born Atlantic City, N. J.) Sept. 1921 to June 1924 student, Cornell Univ. *TT 1: SP 1.* June 1924 to date Engr. and Estimator, with Edward L. Bader, Gen. Contr., and Daniel S. Bader Constr. Co. *TT 2.9: SP 2.9. TT 3.9: SP 3.9.* Refers to W. H. Collisson, Jr., J. W. Hackney, E. F. McClintock, C. G. Wigley, K. K. Wyatt.

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(13) **BAGNALL, CYRIL BASKERVILLE**, Southern California Edison Co., Big Creek, Cal. (Age 25. Born Dudley, England.) May to Dec. 1920 Draftsman, Cable Accessories Co., Dudley, England, designing details for household electric appliances. *TT 0.6: SP 0.6.* Jan. 1921 to April 1924 Asst. Engr., E. E. Jeavons & Co., Civ. Engrs. and Contrs., Dudley Port Staffs, England, drafting, estimating and supervising construction, being Asst. Engr. on sewage-disposal works, sewers, underground conduits, pipe-lines, bridges, canal, roads *TT 3.3: P 3.3.* March 1926 to date Chainman and Rodman, Southern California Edison Co., Los Angeles and Big Creek, Cal., on transmission line and dam construction, at present running transit and level. *TT 1.2: SP 1.2. TT 5.1: SP 5.1.* Refers to R. C. Booth, E. E. Carpenter, H. C. McDonald, E. C. Pantan, H. L. Wheeler.

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(11) **BAILEY, PAUL SHIELDS**, 898 South Josephine St., Denver, Colo. (Age 38. Born Windsor, Colo.) 1913 B. S. in C. E., Colo. Coll. *TT 2: SP 2.* Summer 1910 Chainman and Draftsman on 100 000-acre irrigation project near Green River, Utah. Summer 1912 Instrumentman and Chf. of Party on location and final survey for Auto Toll Road, Dotsero Cut-off. June 1913 to July 1915 fitting up, detailing, tracing, estimating and checking structural steel, American Bridge Co., Gary, Ind., shop plans. *TT 2.1: SP 2.1.* Sept. 1915 to Aug. 1917 and Sept. 1919 to July 1921 with Great Western Sugar Co. as follows: Sept. 1915 to June 1916 Draftsman, factory buildings and layouts; June-Sept. 1916 Chf. of Party on preliminary surveys for factory sites; Oct. 1916 to Aug. 1917 Asst. Res. Engr. on construction of \$1 000 000 beet sugar factory at Bayard, Nebr.; Sept. 1919 to March 1920 Student, sugar factory operation, Brighton, Colo.; March to Dec. 1920 Res. Engr. on construction of \$1 000 000 sugar factory at Johnstown, Colo.; Dec. 1920-July 1921 designing and checking steel and concrete structures for beet sugar factories. *TT 3.3: SP 1.3: P 2: RC 1.7: D 0.8.* Aug. 1917 to Aug. 1919 with Co. B, 115th Engrs., U. S. Army, until Aug. 1918 training at Camp Kearney, Cal., then Sgt., A. E. F., France, on road and bridge repairing and topographic mapping. *TT 2: SP 1.8: P 0.2: RC 0.2.* Aug. 1921 to Feb. 1922 homesteading, Encampment, Wyo. April 1922 to date with Colorado State Highway Dept., until July 1923 as Draftsman, detailing, estimating and checking bridges, then Asst. Bridge Engr., estimating, designing and checking wooden, steel and concrete structures, and since July 1925 Bridge Engr. in charge of designing and drawing of all highway structures. *TT 5: SP 1.2: P 3.8: RC 3: D 0.8. TT 14.4: SP 8.4: P 6: RC 4.9: D 1.1.* Refers to L. D. Blauvelt, L. F. Copeland, H. S. Crocker, R. S. DuBois, J. E. Maloney, G. E. Martin, O. T. Reedy.

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(13) **BAILIFF, NORMAN BOYD**, Fall River Mills, Cal. (Age 25. Born Indianapolis, Ind.) 1926 completed course in surveying and mapping, International Correspondence Schools. July 1922 to Oct. 1923 and Dec. 1923 to Sept. 1925 Chainman, and Sept. 1925 to date Draftsman and Hydrographer, Pacific Gas & Elec. Co. *TT 4.6: SP 4.6.* Refers to B. A. Etcheverry, E. A. Garland, G. C. Green, E. H. Hatch, A. W. Kidder, R. A. Monroe, I. C. Steele.

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(7) **BAKER, SCOTT ALEXANDER**, 2118 South Logan St., Lansing, Mich. (Age 27. Born Lansing, Mich.) 1922 B. S. in C. E., Univ. of Mich. *TT 2: SP 2.* Aug. 1922 to date with City of Lansing, Mich., until May 1923 as Field Inspector, Draftsman and Instrumentman, then Asst. Engr. in charge of sewer design and construction on sewer relief program (\$600 000) and since April 1927 Asst. City Engr. in responsible charge of all construction, paving, sewers, curb and gutter, asphalt plant, etc. *TT 4.9: P 4.9: RC 1.2: D 2.9. TT 6.9: SP 2: P 4.9: RC 1.2: D 2.9.* Refers to W. Bintz, O. E. Eckert, J. R. Pollock, E. D. Rich, D. F. Stockbridge, H. C. Woods.

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(15) **BARCLAY, ANGUS FRANCIS**, 5670 Rosemary Pl., New Orleans, La. (Age 48. Born New Orleans, La.) 1897 to 1898 Rodman, New Orleans & North Eastern R. R. (Southern Ry.) *TT 0.8: SP 0.8.* 1899 to 1900 in fabricating shop, Berlin Iron Bridge Co., East Berlin, Comm. *TT 0.9: SP 0.9.* 1900 to 1904 Track Apprentice, Chairman, Rodman and Instrumentman, Illinois Central R. R. Co. *TT 3.6: SP 3.6.* 1904 to 1906 Instrumentman, successively with John F. Coleman, Cons. Engr., New Orleans, La., St. Louis & San Francisco Ry. Co., and New Orleans & Great Northern R. R., 6 months in charge of locating party. *TT 1.7: SP 1.7.* 1912 to 1916 Res. Engr., Trans-Mississippi Terminal (now Mo. P. T. & P. Terminal Co.) on construction of freight and passenger terminals, New Orleans. *TT 3.3: P 3.3: RC 3.3: D 3.3.* 1906 to 1912 Office Engr. and Engr. in charge of construction, and Feb. 1916 to date Chf. Engr., New Orleans Public Belt R. R. *TT 17.1: SP 2: P 15.1: RC 15.1: D 15.1. TT 27.4: SP 9: P 18.4: RC 18.4: D 18.4.* Refers to J. T. Eastwood, W. W. Hayden, R. Modjeski, D. E. Moran, S. M. Young.

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(11) **BARNEY, WILLIAM ENNIS**, 840 North Lake Ave., Pasadena, Cal. (Age 30. Born Elk City, Kans.) Oct. 1914 to June 1916 student, Oklahoma Agri. and Mech. Coll. *TT 0.7: SP 0.7.* Summer 1913 Rodman, Rogers County (Okla.) Drainage Dist. No. 1. *TT 0.3: SP 0.3.* Aug. 1916 to June 1917 Draftsman and Instrumentman, and July 1917 to July 1918 Asst. Engr., with C. A. Wood, C. E., Stillwater, Okla., made surveys, figured designs, drew plans and inspected construction on sewers, pavements, roads, bridges and culverts. *TT 2: SP 2.* June to Dec. 1919 Chf. of Party and Draftsman with Cook & Johnson, Civ. Engrs., San Bernardino, and with City of San Bernardino, Cal., on surveys, plats, plans, and swimming pool construction. *TT 0.6: P 0.6.* Jan. and Feb. 1920 Draftsman, Southern California Edison Co., Los Angeles, Cal. *TT 0.2: SP 0.2.* March to July 1920 and Dec. 1921 to Sept. 1924 Civ. Engr. Draftsman, California Highway Comm., at Div. V, San Luis Obispo, Cal., preparing plans, profiles and computations for alignment and quantities for state highway improvements and (after Dec. 1921) on culvert design, office relocation of mountainous highways, analysis of and conclusion from experiments in hydraulics by U. S. Bureau of Public Roads, laying grades, etc. *TT 3.2: SP 0.4: P 2.8.* Aug. 1920 to Nov. 1921 in private practice, Cushing, Okla., surveys, reports, design and construction of sanitary sewers, city and county highway pavements and county road and bridge work. *TT 1.3: P 1.3: RC 1.3: D 1.3.* Oct. 1924 to date Asst. Engr., City Engr.'s office, Pasadena, Cal., in charge of all structural design for bridges, culverts, storm drains, retaining walls, underground structures such as pedestrian subways, channel protection, etc. *TT 2.7: P 2.7: RC 2.7: D 2.7. TT 11: SP 3.6: P 7.4: RC 4: D 4.* Refers to T. D. Allin, R. L. Anderson, W. J. Fox, S. B. Morris, R. V. Orbison, C. W. Sopp.

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(1) **BARRUS, ARTHUR WILLIAM**, 465 Senator St., Brooklyn, N. Y. (Age 33. Born Brooklyn, N. Y.) 1915 B. S. in C. E., and 1920 C. E., Cooper Union Inst. Tech. *TT 2: SP 2.* June 1909 to Sept. 1914 with New York Edison Co., New York City. June to Aug. 1915 Jun. Engr., Public Service Comm., on design of details for subway construction in New York City. *TT 0.2: SP 0.2.* Aug. 1915 to Jan. 1916 Designer, Burchartz Fireproofing Co., New York City, on reinforced concrete structures with particular application to special terra cotta floor block. *TT 0.5: P 0.5: D 0.5.* Jan. 1916 to Sept. 1917 with Turner Constr. Co., New York City, as Draftsman-Checker in Eng. Dept. and Engr. on Lines and Grades and Steel on construction of reinforced concrete industrial buildings. *TT 1.8: SP 1: P 0.8: RC 0.5: D 0.3.* Sept. 1917 to May 1919 with U. S. Army, France as Regt. Sgt. Major with 305th Field Artillery, being Acting Bn. Orienting Officer at the Front and graduated at Officers' Training School, Saumur; made surveys for target ranges. May to Aug. 1919 with American Concrete Steel Co., Newark, N. J., as Engr. on Lines and Grades and Steel on construction of reinforced concrete factories. *TT 0.3: P 0.3: RC 0.3.* Aug. 1919 to Oct. 1921 with Walter Kidde & Co., New York City, as Res. Engr., Estimator, Statistician on construction of factories, power houses, etc., represented owners in field and later had charge of cost accounting and estimates. *TT 2.2: P 2.2: RC 2.2.* Oct. 1921 to Oct. 1922 Estimator,

Shape, Bready & Peterkin, New York City, in charge of estimates for construction of buildings, making surveys and following up subcontracts. *TT 1: P 1: RC 1.* Oct. 1922 to date Engr., William J. Taylor Co., New York City, in charge of estimates and construction of office and industrial buildings, hotels and apartment houses. *TT 4.7: P 4.7: RC 4.7. TT 12.7: SP 3.2: P 9.5: RC 8.7: D 0.8.* Refers to J. G. Ahlers, E. C. Epple, F. E. Foss, A. B. Heiser, W. J. Heiser, J. L. Jewell, A. B. Miller, C. T. Schwarze.

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(13) **BARRY, JAMES PURD**, 156 Nova Drive, Piedmont, Cal. (Age 41. Born Marysville, Cal.) 1½ years student, Eng. Coll., Univ. of California. *TT 0.3: SP 0.3.* June 1911 to Aug. 1912 and June to Aug. 1913 Engr., Holt Mfg. Co., Stockton, Cal., on design and detail of Caterpillar tractor. *TT 1.5: P 1.5.* Jan. 1914 to Sept. 1917 Draftsman-Engr. for City Engr., Oakland, Cal., on investigation of water-front deeds, property lines, wharves, structures, etc., and design of storm and sanitary sewers, street improvements, etc. *TT 3.8: P 3.8.* Oct. 1917 to date Chf. Hydr. Engr., Redwood Mfrs. Co., San Francisco, Cal., in charge of design and erection of wood stave pipes (max. 11½ ft.), for hydro-electric, irrigation and municipal water development, also flumes and surge tanks, including 10 miles of 30-in. pipe for Norfolk, Va., 6 miles of 36-in. pipe for Miami, Fla., and 16 miles of 36-in. pipe for Phoenix, Ariz. *TT 9.5: P 9.5: RC 9.5: D 9.5. TT 15.1: SP 0.3: P 14.8: RC 9.5: D 9.5.* Refers to A. V. Garratt, A. Givan, T. H. King, W. B. Rittenhouse, C. C. Young.

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(4) **BELING, GEORGE NORMAN**, 1227 Lindley Ave., Philadelphia, Pa. (Age 24. Born Philadelphia, Pa.) 1927 B. S., Pa. State Coll. *TT 2: SP 2.* Refers to R. O'Donnell, E. D. Walker.

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(4) **BENDER, HARRY**, 3331 North Seventeenth St., Philadelphia, Pa. (Age 22. Born Philadelphia, Pa.) 1927 B. S. in C. E., Drexel Inst. *TT 2: SP 2.* June 1924 to Jan. 1925 Chainman and Levelman on surveys, and drafting and computing in office, Pennsylvania State Highway Dept. *TT 0.5: SP 0.5.* June 1925 to Jan. 1926 Transitman, and summer 1926 Draftsman, Philadelphia Bureau of Surveys. *TT 0.5: SP 0.5. TT 3: SP 3.* Refers to H. L. Bowman, T. Buckley.

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(5) **BENSON, FRANK ROBERT**, P. O. Box 309, Newport News, Va. (Age 36. Born Portsmouth, Va.) 1912 M. E., Va. Pol. Inst. *TT 2: SP 2.* June 1912 to June 1915 Draftsman, Air Tight Steel Tank Co., Hazelwood, Pa., on design, shop assembly, testing and sales engineering for power sprayers, gasoline storage equipment and tanks. *TT 3: SP 2: P 1: D 1.* June 1915 to date with Newport News (Va.) Shipbuilding & Dry Dock Co., seven years as Draftsman on design and testing of ship machinery, 1922-1926 on design of hydraulic turbines and accessories, 3½ years as Asst. Hydr. Engr., and since 1926 Hydr. Engr., on design, construction and testing of hydraulic turbines, power plants, and accessories. *TT 12: SP 2: P 10: RC 4: D 8. TT 17: SP 6: P 11: RC 4: D 9.* Refers to H. L. Cooper, A. C. Lee, C. A. Mees, L. N. Reeve, C. L. Reid, G. L. Smith.

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(4) **BERG, MONCURE BURKE**, 321 Pyne Hall, Princeton, N. J. (Age 22. Born New York City.) 1927 B. S. in C. E., Princeton Univ. Summer 1925 Student Engr., Delaware & Hudson Co., running a relocation survey, part of time acted as Head Chainman and plotted topographical map. *TT 2: SP 2.* Refers to G. E. Beggs, F. H. Constant, P. H. DeWitt.

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(14) **BERRY, GUY NEILL**, 905 Moreau Drive, Jefferson City, Mo. (Age 38. Born Marion, Iowa.) 1915 C. E., Univ. of Mo. *TT 2: SP 2.* May 1910 to Sept. 1912, summer 1914 and Oct. 1916 to March 1917 with Chicago, Rock Island & Pacific Ry., as Chainman, Rodman and Instrumentman, laid out store and oil house, supervised driving of concrete piles for foundation, part of time in charge of party cross-sectioning and setting stakes for bank widening and ballasting, etc. *TT 2.8: SP 2.8.* Summer 1913 Levelman, in charge of party, Grand Trunk-Wabash Lines. June 1915 to Oct. 1916 and March 1917 to May 1918 with Interstate Commerce Comm., successively as Rodman, Asst. Computer, and Instrumentman in charge of cross-section party (1 year) and Computer in charge of computing field notes (9 months). *TT 2.6: SP 2.6.* May 1918 to June 1920 Private, Corporal, Battalion Sergeant Major, Master Engr., 313th Engrs., U. S. Army, 10 months in France, 2 months in Engr. Candidates School. *TT 1.1: SP 1.1.* July 1919 to March 1920 Senior Land Appraiser, Chicago, Burlington & Quincy R. R., in charge of field party on valuation of right of way, examining assessment and sales records, etc. *TT 0.7: P 0.7: RC 0.7.* March 1920 to date Asst. Engr. of Materials and Tests, Missouri State Highway Dept., on laboratory tests and inspection of materials, supervising and directing laboratory work, supervising office work and assisting in administrative work, purchase and distribution of materials, preparation of

contracts and estimates for materials; assisted in selection of equipment and selection and training of personnel; also assisted in two revisions of standard specifications for state road and bridge work. *TT 7.3: P 7.3: RC 7.3: D 2. TT 16.5: SP 8.5: P 8: RC 3: D 2.* Refers to R. C. Barnett, C. W. Brown, F. Kersting, H. A. LaRue, E. J. McCaustland, B. H. Piepmeyer, W. W. K. Sparrow, J. S. Worley.

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(1) **BERRY, ROBERT FREEMAN**, Box 205, Oceanport, N. J. (Age 23. Born Rockaway, N. J.) 1926 B. Sc. in C. E., Rutgers Coll. *TT 2: SP 2.* June 1926 to Jan. 1927 Timekeeper, and Jan. 1927 to date Engr., building layout, Hughes-Foulkrod Co., Philadelphia, Pa. *TT 0.3: SP 0.3. TT 2.3: SP 2.3.* Refers to E. H. Rockwell, S. A. Stephenson, Jr.

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(1) **BIEDERMANN, ADOLPH CELESTIN**, 25 East Clarke Pl., Bronx, New York City. (Age 33. Born New York City.) Licensed Civ. Engr., New York State. 1918 B. S. in C. E., Cooper Union. *TT 2: SP 2.* Aug. 1921 to April 1924 with Delaware, Lackawanna & Western R. R., Concrete Eng. Dept., designing and checking bridge work, viaducts, retaining walls and buildings. *TT 2.7: P 2.7: RC 2.7: D 2.7.* Aug. 1916 to July 1921 Draftsman and Checker, and April 1924 to date Checker and Designer, industrial buildings, Turner Constr. Co., New York City. *TT 7: SP 1: P 6: RC 3: D 5. TT 11.7: SP 3: P 8.7: RC 5.7: D 7.7.* Refers to E. C. Epple, F. E. Foss, H. G. Hauck, A. B. Heiser, H. C. Paddock, L. W. Weed, S. Wilmot.

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(8) **BIGLER, HUGH PATTERSON**, 228 North La Salle St., Chicago, Ill. (Age 27. Born Burlington, Iowa.) 1922 B. S. Ch. E., Iowa State Coll. *TT 2: SP 2.* Summer 1921 and June 1922 to July 1925 with Illinois Div. of Highways, as Jun. Testing Engr. in laboratory, and (after June 1922) Jun. Testing Engr. and Asst. Engr. of Materials in office and field on inspection of materials design and traffic research on Bates Experimental Road, and later in charge of Educational Dept. *TT 3.1: SP 1: P 2.1: RC 2.1: D 1.* July 1925 to April 1926 member of firm, Hurden Constr. Co., Springfield, Ill., on cost accounting, estimating, business management and superintending construction on reinforced concrete bridges, culverts, gutter, etc. *TT 0.8: P 0.8: RC 0.8.* April 1926 to date Eng. Secy., Rail Steel Bar Assoc., Chicago, Ill. (Association of manufacturers of reinforcement), in direct charge of public relations, contact with engineering profession, technical advertising and publicity and membership on technical committees. *TT 1.2: P 1.2: RC 1.2: D 0.5. TT 7.1: SP 3: P 4.1: RC 4.1: D 1.5.* Refers to G. F. Burch, H. F. Clemmer, E. M. Fleming, H. W. Russell, A. E. Stoddard.

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(13) **BINKLEY, THAD CHRISTIAN**, P. O. Box 1245, Stanford University, Cal. (Age 25. Born San Francisco, Cal.) 1926 A. B., Dept. of Civ. Eng., Stanford Univ. *TT 2: SP 2.* July to Oct. 1923 Mine Surveyor, Oceanic Quicksilver Co., Napa County, Cal., being Chf. of Party on an underground survey, mapping and geologic studies. July to Oct. 1924 Jun. Engr., Standard Oil Co. of California, on compilations of cost data, earthwork computations, studies and reports. June 1926 to date Office Asst. for Thebo, Starr & Anderton, on cost analysis, drafting, concrete and miscellaneous design, hydrographic reports, estimates, etc. *TT 1: SP 1. TT 3: SP 3.* Refers to J. C. L. Fish, W. B. McMillan, C. D. Marx, L. B. Reynolds, H. Schorer, C. B. Wing.

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(12) **BIRCH, FRED GRAHAM**, Box 1436, Great Falls, Mont. (Age 42. Born Pembina, N. Dak.) 1906 B. S., N. Dak. Agri. Coll. *TT 2: SP 2.* June 1908 to date Secy-Treas., S. Birch & Sons Constr. Co. of Utah, at Fargo, N. Dak., on cost estimates and construction supervision on pavements, sewer systems and reinforced concrete structures, including reinforced concrete and fireproofing of L. C. Smith Bldg. (42 stories), Seattle (1912-1913), being responsible for construction layout and superintending installation of equipment on various projects. *TT 19: SP 9.5: P 9.5: RC 9.5. TT 21: SP 11.5: P 9.5: RC 9.5.* Refers to F. L. Anders, J. E. Bell, D. I. Okes, S. R. Okes, F. Scotten, H. M. Sprague.

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(6) **BLACKBURN, GEORGE BLAIR**, Care, West Virginia Utilities Co., Morgantown, W. Va. (Age 27. Born New Paris, Pa.) 1927 B. S. C. E., W. Va. Univ. *TT 2: SP 2.* Refers to L. V. Carpenter, R. P. Davis.

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(2) **BLANDFORD, SIDNEY EDGAR, Jr.**, Hotel Standish, Worcester, Mass. (Age 22. Born Winthrop, Mass.) 1927 B. S., Mass. Inst. Tech. At present Transitman, American Steel & Wire Co., South Works, Worcester, Mass. *TT 2: SP 2.* Refers to J. B. Babcock, 3d, C. M. Spofford.

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(9) **BOBEAU, LUCIUS McCLELLAN**, 355 The Arcade, Cleveland, Ohio. (Age 41. Born Brownsville, Tex.) 1910 B. S. in C. E., Wash. State Coll. *TT* 2: *SP* 2. 1902 to 1906 Axeman, Chainman and Instrumentman, U. S. Township Surveys. *TT* 3.3: *SP* 3.3. 1908 Chairman, Rodman and Instrumentman, Great Northern R. R. *TT* 0.7: *SP* 0.7. 1908 on private land and mineral surveys. 1909 Chf. Topographer and Instrumentman, Flathead Valley R. R. 1910 Project Engr., Stratford and Adrian Irrigation Cos. *TT* 0.7: *P* 0.7: *RC* 0.7. 1910 to 1911 Field Engr., Washington Water Power Co. (6 months) and J. G. White Co. (6 months). *TT* 1: *SP* 1. 1911 Engr., Colville Valley Drainage Canal. *TT* 0.5: *P* 0.5: *RC* 0.5. 1911 to 1912 on private surveys. *TT* 0.7: *P* 0.7: *RC* 0.7. 1912 with Canadian Consolidated Mining & Smelting Co., on construction and plant extensions. *TT* 0.2: *SP* 0.2: *RC* 0.2. 1912 to 1914 Asst. Engr. to A. L. McCulloch, Cons. Engr., on general engineering and construction for railroads, mining companies and municipalities, including Cranbrook Water-Works. *TT* 2: *P* 2: *RC* 2: *D* 1. 1915 to 1916 Engr., Dominion Bridge Co., on plant design and construction, etc. *TT* 1.5: *SP* 0.5: *P* 1: *RC* 1: *D* 0.5. 1916 to 1917 Chf. Engr., Transcona Shell Co. (Batavia Steel Products Corporation), on plant construction, production organization, etc. for execution of three Imperial Govt. contracts. *TT* 1.5: *P* 1.5: *RC* 1.5: *D* 1.5. 1917 to 1919 Asst. Chf. Engr., and later Production Engr., T. H. Symington Co. *TT* 2: *P* 2: *RC* 1.5: *D* 0.6. 1919 Production Mgr., Jas. Cunningham Sons Co., in charge of plant improvement and production management. *TT* 1: *P* 1: *RC* 1. 1920 to 1921 Cons. Engr., Lakewood Eng. Co., Gen. Constr. Equipment Dept. *TT* 1.5: *P* 1.5: *RC* 1.5: *D* 0.5. 1921 to date Cons. Engr., Cleveland, Ohio, on surveying, municipal improvements, industrial plants, power, bridges, buildings, dams, heating, ventilating, real-estate development, reports, appraisals, expert witness and counsel for various firms. *TT* 6.5: *P* 6.5: *RC* 6.5: *D* 2. *TT* 25.3: *SP* 7.8: *P* 17.5: *RC* 17.2: *D* 6.1. Refers to J. D. Anderson, W. H. Evers, A. G. Husted, F. A. Pease, C. W. Root, W. A. Stinchcomb.

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(10) **BOGGS, GILBERT HILLHOUSE, Jr.**, 733 Williams St., N. W., Atlanta, Ga. (Age 21. Born Atlanta, Ga.) 1927 B. S. in C. E., Ga. School Tech. *TT* 2: *SP* 2. Refers to R. P. Black, F. C. Snow.

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(5) **BOHNET, CHARLES FREDERICK**, 34 Echodale Ave., Baltimore, Md. (Age 21. Born Baltimore, Md.) 1927 B. E., The Johns Hopkins Univ. *TT* 2: *SP* 2. June 1923 to Oct. 1924 Eng. Asst., C. & P. Telephone Co. of Baltimore City, on pole-line inspection, inventory of plant, etc. *TT* 1.3: *SP* 1.3. *TT* 3.3: *SP* 3.3. Refers to J. H. Gregory, J. T. Thompson.

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(15) **BOOTON, RICHARD CRITTENDEN**, 4057 Travis St., Dallas, Tex. (Age 28. Born Cuero, Tex.) Dec. 1917 to May 1919 with Henry E. Elrod, Engr., as Chainman, Rodman, Instrumentman and Computer. *TT* 1.4: *SP* 1.4. May 1919 to Sept. 1921 with Henry Exall Elrod Co., until June 1921 as Res. Engr. on construction of state and Federal Aid highways in Taylor and Scurry Counties, then Instrumentman and Inspector on Cisco and Olney Dams. *TT* 2.3: *P* 2.3: *RC* 2.1: *D* 2.1. June 1921 to Nov. 1925 Res. Engr., Elrod Eng. Co., in Texas, on construction of sewers, sewer systems, water lines, water and sewer extensions, street paving, a filtration plant, dam, etc., in various cities in Texas, various surveys, etc. (given in detail in application). *TT* 4.2: *P* 4.2: *RC* 4.2: *D* 2.1. Nov. 1925 to date Engr., Jagoe Constr. Co., Contr., on construction of street paving and assessments for paving in Denton, Mexia and Sherman, Tex. *TT* 1.6: *P* 1.6: *RC* 1.6. *TT* 9.5: *SP* 1.4: *P* 8.1: *RC* 7.9: *D* 4.2. Refers to J. S. Barlow, F. W. Chappell, H. E. Elrod, A. E. Firmin, R. D. Morgan, J. G. Reagan.

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(15) **BOYT, ELMER VERNON**, Cheek, Tex. (Age 21. Born Cheek, Tex.) 1927 B. S. in C. E., Tex. Agri. and Mech. Coll. *TT* 2: *SP* 2. Refers to J. T. L. McNew, J. J. Richey, C. E. Sandstedt.

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(11) **BREWER, RICHARD NELSON**, 1027 Pennsylvania Ave., Boulder, Colo. (Age 25. Born Berlin, Wis.) 1927 B. S. in C. E., Univ. of Colo. *TT* 2: *SP* 2. Summer 1916 Chainman, and summer 1917 Rodman, North Side Land & Water Co., Jerome, Idaho. Summer 1919 Rodman, City of Jerome. Summer 1920 Hydrographer, North Side Canal Co. of Jerome, on stream measurements for seepage data. July to Dec. 1923 Asst. Engr., West Okanogan Valley Irrigation Dist., Oroville, Wash., being Instrumentman on canal location and cross-section work, stream measurements, designing and estimating costs on canal, flume and tunnel construction. *TT* 0.4: *P* 0.4: *RC* 0.2: *D* 0.2. Oct. to Dec. 1924 Draftsman, Lakeside Constr. Co. of Boulder, Colo., mapping and profile work. *TT* 0.2: *P* 0.2. *TT* 2.6: *SP* 2: *P* 0.6: *RC* 0.2: *D* 0.2. Refers to R. L. Downing, F. R. Dungan, C. L. Eckel, H. J. Gilkey.

709

(1) **BRITTON, CLARK VEAZIE**, 46 Hasbrouck Pl., Rutherford, N. J. (Age 24. Born Beaver, Pa.) 1925 B. S. in C. E., Va. Mil. Inst. *TT 2: SP 2.* July 1925 to Dec. 1926 Structural Detailer, American Bridge Co., Pencoyd Plant, detailing steel members for office and mill buildings. *TT 1.4: SP 1.4.* Jan. 1927 to date Superv. Engr., Air Reduction Sales Co., New York City, in charge of construction and maintenance in field. *TT 0.3: P 0.3: RC 0.3. TT 3.7: SP 3.4: P 0.3: D 0.3.* Refers to J. A. Anderson, F. L. Castleman, A. R. Raymer

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(10) **BROWN, JOHN THOMPSON**, Box 197, Concord, N. C. (Age 23. Born Charlotte, N. C.) 1927 B. S. in C. E., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, H. F. Janda.

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(14) **BROWN, RALPH ELMORE**, 920 Laramie St., Manhattan, Kans. (Age 22. Born Kelso, Kans.) 1927 B. S., Kans. State Coll. Sept. 1925 to date (while student) Instrumentman and Rodman with City Engr., Manhattan, Kans., on sewer surveys, pavements, etc. Summer 1926 Instrumentman on sewer surveys with City Engr., Salina, Kans. *TT 2: SP 2.* Refers to L. E. Conrad, F. F. Frazier, M. W. Furr, R. J. Paulette, C. H. Scholer, L. V. White.

712

(6) **BROWNING, CLAUD FRANKLIN**, Terra Alta, W. Va. (Age 22. Born Terra Alta, W. Va.) 1927 B. S. C. E., W. Va. Univ. *TT 2: SP 2.* Refers to L. V. Carpenter, R. P. Davis.

713

(10) **BURGESS, GEORGE VAN TRUMP**, Fannin, Miss. (Age 24. Born Pittsburgh, Pa.) 1925 Graduate, Sheffield Scientific School. *TT 2: SP 2.* Summers 1922-1924 Chairman, Delaware & Hudson Co. (1922), Kansas City Southern R. R. acting as Stakeman and Topographer on surveys (1923) and Pacific Gas & Elec. Co. of San Francisco, Cal. (1924). Aug. 1925-June 1926 Field Clerk, Erie R. R. Co., being Asst. to Res. Engr. on relocation of railroad around Wanaque (N. J.) Reservoir of North Jersey Dist. Water Supply Comm. *TT 0.9: SP 0.9.* July 1926 to date Res. Engr., Jackson & Eastern Ry. Co. of Mobile, Ala., in charge of location and construction from Goshen Springs to Jackson, Miss. (19 miles). *TT 1: P 1: RC 1. TT 3.9: SP 2.9: P 1: RC 1.* Refers to W. H. Adey, N. C. Holdredge, W. J. H. Manning, C. H. Splitstone, C. J. Tilden.

714

(4) **BURKART, EDWIN HOWARD, Jr.**, New Britain, Pa. (Age 28. Born Philadelphia, Pa.) 1922 B. S. in C. E., Pa. State Coll. *TT 2: SP 2.* June 1922 to date with Reading Co., until Nov. 1922 as Rodman at Williamsport, Pa., then Draftsman in Bridge Dept., designing and detailing bridges. *TT 5: SP 5. TT 7: SP 7.* Refers to P. S. Baker, C. Dillenbeck, C. H. Hitchcock, R. J. Lawrence, W. Sebastian.

715

(7) **BUSSEY, HENRY MANNING**, 219 Sheridan Ave., Saginaw, Mich. (Age 38. Born Anna, Ill.) 1906 to 1908 student, Univ. of Illinois. *TT 1: SP 1.* Sept. 1908 to Jan. 1909 Stadiaman and Recorder, U. S. Govt. topographic survey, Mississippi River. *TT 0.4: SP 0.4.* Feb. to July 1909 Instrumentman, Little River Irrigation and Levee Dist., Missouri. *TT 0.5: SP 0.5.* Aug. to Dec. 1909 Rodman, Midland Valley R. R. *TT 0.4: SP 0.4.* Dec. 1909 to July 1916 with Westinghouse, Church, Kerr & Co., as follows: Dec. 1909 to Jan. 1911 Asst. Res. Engr., on construction of railroad shops on Chicago, Burlington & Quincy R. R. at Havelock, Nebr.; Feb. to Dec. 1911 Res. Engr. on shops on New York, Ontario and Western R. R. at Middletown, N. Y.; Feb. 1912 to Feb. 1913 Res. Engr. on industrial plant for J. I. Case Co., at Racine, Wis.; Feb. to May 1913 and Nov. 1913 to Jan. 1914 Engr. in New York office; May to Nov. 1913 Res. Engr. on power plant for Southern Massachusetts Power Co., Fall River, Mass.; Feb. to Dec. 1914 and March 1915 to July 1916 Res. Engr. and Asst. Supt. on development of Freeport (Tex.) Sulphur Co.'s plants and (after March 1915) plants for Winchester Co. at New Haven, Conn. *TT 6.5: P 6.5: RC 4.9: D 1.6.* July 1916 to June 1921 Supt. of Constr. on shops for Winchester Co., at New Haven. *TT 5: P 5: RC 4: D 1.* July 1921 to Jan. 1922 Engr.-Supt., W. J. Cameron Co., on road construction in Colorado. *TT 0.5: P 0.5: RC 0.5: D 0.1.* May 1923 to date Supt., Battey & Klipp, Inc., Engrs., Chicago, Ill., on power houses, railroad shops and engine terminals. *TT 4: P 4: RC 3.5: D 0.5. TT 18.3: SP 2.3: P 16: RC 12.9: D 3.2.* Refers to W. C. Bodycomb, H. S. Crocker, J. N. Hatch, W. E. Ingram, J. S. Means, R. Norris, R. R. Paine.

716

(6) **BUTLER, WILLIAM TENNENT, Jr.**, 143 Tod Lane, Youngstown, Ohio. (Age 24. Born Indianapolis, Ind.) 1925 B. S. in C. E., Univ. of Wash. *TT 2: SP 2.* Nov. 1926 to Feb

1927 with American Bridge Co. *TT 1.2: SP 1.2.* Feb. 1927 to date with Truscon Steel Co. *TT 0.2: SP 0.2.* *TT 3.4: SP 3.4.* Refers to W. F. Allison, I. L. Collier, F. W. Denoer, J. H. Heald, H. L. Maurer, C. C. More.

717

(13) **CADMAN, CHARLES KEENEY**, 354 Mills Bldg., San Francisco, Cal. (Age 64. Born Detroit, Mich.) 1897 to 1899 Gen. Supt. of Constr., Valley R. R. (now Santa Fe), Pinole Div. to West End Franklin Tunnel (San Francisco Constr. Co.) *TT 2: P 2: RC 2.* 1899 to 1901 Engr., California & Northern R. R., Eureka, Cal., located and built extension North to Trinidad, Cal. *TT 2: SP 2.* 1901 to 1903 Supt. of Constr., Hammond Lumber Co., rebuilding mill at Samoa, Cal., on Humboldt Bay. *TT 2: SP 2.* 1903 to 1904 selling, estimating and platting timber lands. *TT 1: P 1: RC 1.* 1904 to 1905 Superv. Engr., installing storm sewer for City of Oakland, Cal. *TT 1: P 1: RC 1.* 1905 to 1906 Contr. and Bldr. of earth and clay dam for North Coast Water Co., Mill Valley, Cal. *TT 1: P 1.* 1906 to 1907 Constr. Engr. with Grant Bros., in charge of building Canania, Yaqui River & Pacific R. R. Co., Delrio to Nogales, Mexico (100 miles), Grant Bros. contract. *TT 1: P 1: RC 1.* Jan. to April 1908 Engr. Mexican Central R. R., on construction from Colima to Manzanillo, Mexico. *TT 0.2: P 0.2: RC 0.2.* April 1908 to 1910 Engr., Panama Canal, in charge of Track Dept., at Bas Obispo, Canal Zone. *TT 2: P 2: RC 2.* 1910 to April 1912 with B. J. Arnold, as Div. Engr., under Asst. Chf. Engr., on Chicago Subway, in charge of Bureau of Inspection and Tests with Arnold Engr. Co. on dam and irrigation work, being Res. Engr. on Mackey (Idaho) Dam and Canals; on dams and canals Colorado Southern Irrigation Co., Canon City, Colo., and Lake Hattie Irrigation Co., Laramie, Wyo., also on physical valuation of Chicago Telephone Co. and International Ry. Co., Buffalo, N. Y. *TT 2: P 2: RC 2: D 1.* May 1912 to 1914 Engr. in charge of construction of concrete storm sewer for City of Berkeley, Cal. *TT 2: P 2: RC 2.* 1916 mining. Sept. 1917 to 1920 Chf. Inspector with U. S. Shipping Board (Wood Div.). *TT 3: P 3: RC 3.* Nov. 1920 to date Chf. Safety Engr., Federal Mutual Liability Insurance Co. *TT 6.5: P 6.5: RC 6.5.* *TT 25.8: SP 4: P 21.8: RC 21.8: D 1.* Refers to B. J. Arnold, G. H. Binkley, G. W. Goethals, R. C. Hackley, H. W. King.

718

(4) **CALDERHEAD, ROBERT JAMES**, Wellsboro, Pa. (Age 37. Born in Westchester County, N. Y.) Student, Worcester Acad. (2 years) and Edinburgh Univ. (1 year.) June 1906 to Sept. 1907 and March 1910 to March 1911 with New York Central & Hudson River R. R., as Chainman, Rodman, etc. *TT 2.2: SP 2.2.* March 1911 to March 1913 Rodman, New York, Ontario & Western R. R. Co., ran level and transit, general drafting, etc. *TT 2: SP 2.* March 1913 to Sept 1917 with New York State Dept. of Highways, as Office Asst., Squad Boss, drafting, construction work on brick and macadam, and some field work as Chf. of Party. *TT 4.5: P 3.5: P 1: RC 1.* Sept. 1917 to April 1918 Inspector, Bartlett Hayward Co., Baltimore, Md., in charge of construction of T. N. T. plants, Brooklyn, N. Y. *TT 0.6: P 0.6: RC 0.6.* May to Nov. 1919 Transitman with Hoadley & Giles, Binghamton, N. Y., on subdivision work and disposal plant. *TT 0.5: SP 0.5.* Feb. 1924 to date with Pennsylvania Dept. of Highways, as Chf. Inspector in charge of road construction (27 miles), and at present Chf. Dist. Draftsman. *TT 3.3: P 3.3: RC 3.3.* *TT 13.2: SP 8.3: P 4.9: RC 4.9.* Refers to W. E. Bailey, E. A. Bryden, Jr., R. B. Hoadley, Jr., I. V. Hule, E. D. Parker, G. P. Searight, E. S. Warner.

719

(11) **CALDWELL, RICHARD ELMER**, 2923 South Hoover St., Los Angeles, Cal. (Age 52. Born St. John, Utah.) 1904 B. S. in M. E., Univ. of Utah. *TT 2: SP 2.* June 1904 to date in private practice, since July 1910 as member of firm, Caldwell & Richards, Civ. Engrs., at Salt Lake City, Utah, and Los Angeles, Cal., on surveys, design and construction of irrigation-supply works, water-works, irrigation, paving, hydro-electric design, etc.; in responsible charge of work, including design and supervision of construction of drainage of farm land in Utah (over 100 000 acres, about \$4 000 000) (Oct. 1916 to April 1921), served on Colorado River Comm.; past 3 years principally on work on Colorado River for Palo Verde Irrigation Dist., Cal. (approx. 90 000 acres); also June 1904 to Oct. 1906 taught mathematics at L. D. S. Univ., Salt Lake City; Oct. 1906 to Oct. 1908 in responsible charge of irrigation supply work for Iosepa Agricultural & Stock Co.; April 1921 to June 1924 State Engr. of Utah. *TT 22.2: SP 1: P 21.2: RC 21.2.* *TT 24.2: SP 3: P 21.2: RC 21.2.* Refers to S. Q. Cannon, A. F. Doremus, R. A. Hart, R. B. Ketchum, H. S. Kleinschmidt, R. R. Lyman, A. Z. Richards.

720

(2) **CANADA, FERNANDO ALEJANDRO**, 152 Harvard St., Brookline, Mass. (Age 20. Born Havana, Cuba.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to J. B. Bahcock, 3d, J. W. Howard, C. M. Spofford.

721

- (3) **CARPENTER, WILFRED GILBERT**, Monticello, N. Y. (Age 21. Born Monticello, N. Y.) 1927 B. S. in Civ. Eng., Union Coll. *TT 2: SP 2*. Refers to H. Miller, W. C. Taylor.

722

- (1) **CASELLAS, RAMON RAMOS**, Central Playa Grande, Vieques, Porto Rico. (Age 46. Born Manati, Porto Rico.) 1905 C. E., Rens. Pol. Inst. *TT 2: SP 2*. July 1905 to Jan. 1915 City Engr., Arecibo, Porto Rico, in charge of design, construction and maintenance of all municipal works. *TT 9.5: P 9.5: RC 4.7: D 4.8*. Jan. to July 1915 partner of Ramos y Martiñez, Arecibo, in private practice of engineering and architecture. *TT 0.5: P 0.5: D 0.5*. July 1915 to Sept. 1920 with Dept. of Interior, Porto Rico, as follows: July 1915 to Aug. 1916 Res. Engr. at Arecibo; Aug.-Dec. 1916 Maintenance Engr., and Jan. 1917 to Jan. 1919 Constr. Engr., Chf. of Div. of Roads and Bridges, Bureau of Public Works, San Juan; Jan. 1919 to Sept. 1920 Chf. Engr., Div. of Municipal Works, San Juan. *TT 5.2: P 5.2: RC 3.8: D 1.4*. Sept. 1920 to March 1927 Gen. Mgr., Mario Mercado e Hijos, Sugar Planters and Mfrs., Central Rufina, Guayanilla, Porto Rico. *TT 6.5: P 6.5: RC 6.5*. March 1927 to date Gen. Mgr., Benitez Sugar Co. and Jose J. Benitez e Hijos, Vieques, Porto Rico. *TT 0.3: P 0.3: RC 0.3. TT 24: SP 2: P 22: RC 15.3: D 6.7*. Refers to M. V. Domenech, R. A. Gonzalez, A. S. Lucchetti Otero, R. Ramirez, E. Totti y Torres.

723

- (13) **CAYA, JOSEPH PETER**, 2724 Pine St., San Francisco, Cal. (Age 27. Born San Francisco, Cal.) 1922 B. S., Univ. of Cal. *TT 2: SP 2*. June to July 1922 Rodman and Chainman with Fred H. Tibbets, Cons. Engr., on hydrographic survey. *TT 0.1: SP 0.1*. July 1922 to Jan. 1925 Asst. Engr., Sutter Butte Canal Co., Gridley, Cal., in charge of office work on plans and making estimates for irrigation of about 50 000 acres. *TT 2.5: SP 0.5: P 2: RC 2*. Jan. to April 1925 Draftsman with Erle L. Cope, Cons. Engr., San Francisco, Cal. *TT 0.2: SP 0.2*. May to July 1925 Draftsman, Sutter Butte Canal Co., preparing maps and statistical data. *TT 0.2: SP 0.2*. July 1925 to date Asst. Engr., California Bridge & Tunnel Co., on design of plant, equipment and methods of construction for Oakland-Alameda Estuary Subway, Oakland, Cal. *TT 2: P 2: D 2. TT 7: SP 3: P 4: RC 2: D 2*. Refers to E. L. Cope, S. W. Gibbs, F. B. Smith, N. Ware, J. G. Wright.

724

- (13) **CHAN, FRANK JUE**, 910½ Sixth St., Sacramento, Cal. (Age 25. Born San Francisco, Cal.) 1925 B. S., Univ. of Cal. *TT 2: SP 2*. May 1926 to date Jun. Structural Draftsman, Dept. of Public Works, Div. of Architecture, Sacramento, Cal., on structural detailing and tracing steel and reinforced concrete building. *TT 1: SP 1. TT 3: SP 3*. Refers to A. C. Alvarez, F. M. Green, C. H. Kromer.

725

- (2) **CHASE, EDWARD**, Holden, Mass. (Age 21. Born Brockton, Mass.) 1927 B. S. Mass. Inst. Tech. *TT 2: SP 2*. Refers to J. B. Babcock, 3d, H. K. Barrows, A. S. Beale, H. H. Chase, C. M. Spofford.

726

- (11) **CHASE, JOHN HOWE**, Box 602, Riverside, Cal. (Age 32. Born Riverside, Cal.) 1916 B. S., Univ. of Rochester. 1918 B. S., Harvard Univ. and Mass. Inst. Tech. *TT 2: SP 2*. May 1918 to July 1919 Lieut., Corps of Engrs., U. S. Army, in United States and France, with 108th and 318th Engrs. *TT 1.1: SP 1.1*. July 1919 to Oct. 1920 Rodman, Atchison, Topeka & Santa Fe R. R. *TT 1.2: SP 1.2*. May 1922 to May 1926 Chainman, Computer, Instrumentman, Asst. to Chf. Engr. and Supt., Santa Fe Irrigation Dist., Rancho Santa Fe, Cal. *TT 4: SP 1: P 3: RC 1.5*. May 1926 to date Engr., Riverside Highland Water Co., Riverside, Cal., in charge of construction (about \$60 000), including wells, pipe lines, pumping plant and appurtenances, also in charge of operation. *TT 1.2: P 1.2: D 1.2. TT 9.5: SP 5.3: P 4.2: RC 1.3: D 1.2*. Refers to G. Cromwell, W. E. Dauchy, G. S. Hinckley, J. N. Irving, J. V. Lippincott, E. A. Rowe, C. M. Spofford, K. Q. Volk.

727

- (2) **CHENEY, LAURENCE BRADFORD**, Southbridge, Mass. (Age 24. Born Southbridge, Mass.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2*. Refers to H. K. Barrows, H. W. Hayward, C. M. Spofford.

728

- (10) **CHEWNING, CHARLIE CLINTON**, Walterboro, S. C. (Age 26. Born Manning, S. C.) 1918-1921 Rodman, Chainman and Levelman, U. S. Geological Survey. *TT 3: SP 3*. 1922 to 1924 Inspector on concrete roads and asphalt pavements in Sumter County, S. C., and since Jan. 1924 successively Chf. of Party on surveys, Asst. Res. Engr. and (after May 1926) Res. Engr. in charge of county highway construction, Colleton County, Walterboro, S. C. *TT 5: SP 2: P 3: RC 3. TT 8: SP 5: P 3: RC 3*. Refers to S. C. Dreyfus, J. G. Hazlehurst, T. K. Legare, F. H. Murray, J. L. Parker.

729

(10) **CHOBOT, EDWIN FRANK**, Care, Converse Bridge & Steel Co., Chattanooga, Tenn. (Age 27. Born Brooklyn, N. Y.) 1921 C. E., Cornell Univ. *TT 2: SP 2.* May to Oct. 1918 Rodman and Instrumentman, Turner Constr. Co., on construction of Army warehouses at Brooklyn, N. Y. Sept. 1921 to Sept. 1922 graduate student and teaching at Cornell Univ. *TT 1: P 1: RC 1.* Oct. 1922 to Jan. 1923 Asst. Field Engr., Phoenix Utility Co., on transmission tower construction. *TT 0.3: P 0.3.* July to Oct. 1920 Draftsman on structural steel details, and Jan. 1923 to date Engr. and Sales Engr. on design, estimating, and sales, with Converse Bridge & Steel Co., Chattanooga, Tenn. *TT 4.5: P 4.5: RC 3: D 4.5.* *TT 7.8: SP 2: P 5.8: RC 4: D 4.5.* Refers to F. A. Barnes, E. N. Burrows, D. Butterfield, C. Crandall, W. R. King, O. J. Miller, J. E. Morelock, A. F. Porzellus, W. H. Sears, D. H. Wood.

730

(2) **CHRISTIANSEN, MORRIS PETER**, P. O. Box 916 Williamstown, Mass. (Age 35. Born Flushing, N. Y.) April 1919 to date Engr., Supt. and at present member of firm and Director, J. R. Hampson & Co., Inc., Pittsfield, Mass.; acted as Chf. of Party in field, and engineered and supervised construction of buildings, etc., including Victory Mill (\$100 000), West Pittsfield, boiler house (\$50 000) for House of Mercy, Capitol Theatre (\$500 000), St. Charles School (\$150 000), parish house (\$150 000) for New Baptist Church, Extension Bldg. No. 8 (\$75 000), G. E. Co., all in Pittsfield, gas plant (\$200 000), North Adams, lime kilns, marble shed, spur track (\$125 000), South Agrement, repairs to beater room and dam, B. D. Rising Paper Co. (\$75 000), Housatonic, Mass., school (\$250 000), Psi Upsilon Fraternity House (\$150 000), and gymnasium, Williams Coll. (\$500 000, under construction), Williamstown, Mass. *TT 8: P 8: RC 8.* Refers to G. W. Chickering, H. Kornfeld, C. E. Lilliestrand, C. B. Lindholm, M. M. Thrane.

731

(12) **CHRISTY, BRUCE VERNER**, 6343 Thirty-Sixth Ave. S. W., Seattle, Wash. (Age 23. Born Minneapolis, Minn.) 1927 B. S. in Civ. Eng., Univ. of Wash. *TT 2: SP 2.* July 1924 to Oct. 1925 and summer 1926 with Washington State Highway Dept., as Chainman, Rodman, Instrumentman, Draftsman, Computer and Levelman on roads, bridges, pavement, grading, etc. *TT 1.3: SP 1.3.* *TT 3.3: SP 3.3.* Refers to W. F. Allison, I. L. Collier, R. M. Gillis, C. C. More, F. W. Panhorst.

732

(12) **CLARK, THOMAS ANDREW**, Adrian, Ore. (Age 30. Born Ithaca, Nebr.) April 1917-Feb. 1919 Private to First Lieut., Engr. Corps, U. S. Army, on construction of buildings and sewers, etc. *TT 0.5: SP 0.5.* Nov. 1916 to April 1917, May 1920 to Dec. 1924 and May 1925 to date with U. S. Bureau of Reclamation, engaged as follows: Nov. 1916 to April 1917 Planetableman on topography and surveys; May 1920 to Oct. 1921 Instrumentman on location and construction of drains, bridges, canals, laterals, etc., Grand Valley and Milk River Projects; Oct. 1921 to Oct. 1923 Chf. of field party on location of canals and drains, Jun. Engr., inspecting concrete and earthwork, Sun River Project, Mont.; Oct. 1923-Dec. 1924 and May 1925-Nov. 1926 Jun. Engr., in charge of field engineering during construction of canals, syphons, bridges, wasteways, etc., Riverton Project, Wyo., and (after May 1925) of topographic surveys and investigations, Boise Vale and Owyhee Projects; since Nov. 1926 Office Engr., responsible for field designs, estimates and costs, Owyhee Project. *TT 7: SP 0.4: P 6.6: RC 2.7.* *TT 7.5: SP 0.4: P 7.1: RC 2.7.* Refers to J. B. Bond, H. D. Comstock, S. O. Harper, R. J. Newell, J. L. Savage.

733

(11) **CLARKSON, EDWARD HALE, Jr.**, 859 Nowita Pl., Venice, Cal. (Age 33. Born Auburndale, Mass.) 1916 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Aug. 1916 to Sept. 1917 and Jan. to April 1918 Asst. Instructor, Civ. Eng. Dept., Massachusetts Inst. of Technology; hydraulic and drafting work, etc. *TT 1.4: P 1.4: RC 1.4.* April to Jan. 1918 Chf. San. Inspector, American Red Cross and U. S. Public Health Service, extra cantonment zones, Columbia and Spartanburg, S. C. *TT 0.3: P 0.3: RC 0.3.* April to Dec. 1918 with U. S. Army, at Officers' Training School, Ft. Monroe, Va.; July 1918 commissioned 2d Lieut., Coast Artillery Corps, with 30th C. A. C., as Orientational Officer at Camp Eustis, Va. *TT 0.7: P 0.7: RC 0.5.* Dec. 1918 to March 1919 with Valuation Dept., Boston & Albany R. R., Boston, Mass. *TT 0.3: P 0.3.* May to June 1919 Asst. to Prof. G. C. Whipple, Harvard Eng. School, Harvard Univ. *TT 0.2: P 0.2: RC 0.2.* June 1919 to April 1920 San. Engr., National Health Board of Rockefeller Foundation, on malaria control work in Southern Arkansas. *TT 0.8: P 0.8: RC 0.8.* April to Aug. 1920 Instructor in Eng., Newark (N. J.) Technical School. *TT 0.4: P 0.4: RC 0.4.* Aug. 1920 to Feb. 1922 not on engineering work. March to June 1922 Chainman, Santa Fe R. R. *TT 0.3: SP 0.3.* June 1922 to Jan. 1924 with J. B. Lippincott, Los Angeles, Cal. as Chainman, Computer, Designer and Inspector on design and construction of irrigation system on Santa Fe ranch, California, also worked on design of

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sewer system for Glendale, Cal., including comparative designs of several alternate sewage-disposal systems. *TT 1.6: SP 0.4: P 1.2: RC 0.8: D 1.2.* Jan. to May 1924 Asst. Engr. with T. H. Kink, San Diego, Cal., on design, irrigation and subdivision work. *TT 0.4: P 0.4: RC 0.4: D 0.4.* June 1924 to June 1925 Draftsman and Asst. Engr., Valuation Dept., San Diego (Cal.) Elec. Ry. *TT 1: SP 0.3: P 0.7: RC 0.7: D 0.3.* July 1925 to date Jun. Civ. Engr., City of Los Angeles, checking design in Sewer Dept. and Storm Drain Dept., at present on design of large pumping plant for storm drain at Venice, Cal. *TT 1.8: SP 0.1: P 1.7: RC 1.7: D 1.7.* *TT 11.1: SP 3.1: P 8: RC 7.1: D 3.6.* Refers to J. B. Babcock, 3d, C. B. Breed, H. W. Brown, H. W. Green, G. L. Hosmer, J. W. Howard, T. H. King, J. B. Lippincott, E. A. Rowe, C. M. Spofford, K. Q. Volk, A. P. von Deesten.

734

(11) **CLAUSEN, ROBERT ESKILSON**, Room 467, P. E. Bldg., Los Angeles, Cal. (Age 23. Born Omaha, Nebr.) 1927 B. S. in C. E., Univ. of Wyoming. Sept. 1923 to Dec. 1925 (at times) Rodman, Draftsman and Instrumentman, Los Angeles & Salt Lake R. R., Union Pacific System, Los Angeles, Cal. on maintenance and construction, estimating, laying out and inspection on track work, pipe lines, retaining walls and concrete bridges. June 1926 to 1927 (while student) Draftsman, City of Laramie, Wyo., on sewer, water and paving plans and inspection. At present with Los Angeles & Salt Lake R. R., Los Angeles, Cal. *TT 2: SP 2.* Refers to J. C. Fitterer, Z. E. Severson.

735

(13) **CLEAVINGER, DAVID SPRONG**, Box 313, Y. M. C. A., Sacramento, Cal. (Age 27. Born Leavenworth, Kans.) 1925 B. S. in C. E., Ohio Northern Univ. *TT 2: SP 2.* Sept. 1919 to Nov. 1921 and Jan. to Sept. 1923 Levelman until Nov. 1921 for Colorado Fuel & Iron Co., then for Trinidad Water Works. *TT 2.8: SP 2.8.* Aug. 1925 to Dec. 1926 Draftsman, Pacific Gas & Elec. Co., computing and drafting on rights of way for power-distribution lines. *TT 1.3: SP 1.3.* March to May 1927 Draftsman for J. D. Galloway, San Francisco, Cal. At present Delineator, State Board of Public Works, Div. of Hydr. Eng., California. *TT 0.2: SP 0.2. TT 6.3: SP 6.3.* Refers to J. H. P. Fisk, J. D. Galloway, W. R. Lewis, R. A. Monroe, A. R. Webb.

736

(8) **COCHRAN, HAROLD CHESTER**, 6320 Kenwood Ave., Chicago, Ill. (Age 24. Born Akron, Ohio.) 1925 B. S. C. E., Univ. of Mich. *TT 2: SP 2.* July 1925 to date Jun. Engr., San. Dist. of Chicago, San. Investigation Dept. *TT 1.7: SP 1.7. TT 3.7: SP 3.7.* Refers to N. E. Anderson, W. H. Ashley, O. L. Eltinge, W. C. Hoad, H. L. McMillan, L. Pearse, E. L. Pflanz, H. E. Riggs, R. H. Sherlock, L. C. Whittemore.

737

(15) **COLLINS, HARRY JOSEPH**, Shamrock, Tex. (Age 27. Born Dallas, Tex.) May 1919 to May 1920 Rodman and Chainman, City of Dallas, Tex. *TT 1: SP 1.* May 1920 to May 1921 Chainman and Instrumentman, City of Dallas and Dallas County Levee Dist. No. 10 (1920) and Nagle, Witt & Rollins, Dallas (1921). *TT 0.9: SP 0.9.* May 1921 to March 1922 with Trinity Oil Co., as Refinery Clerk and on laboratory work, testing gasoline and oils. *TT 0.8: SP 0.8.* March to Dec. 1922 with Atlantic Oil Co., on surveys and inventory of leases. *TT 0.7: SP 0.7.* Feb. to Nov. 1923 with Southern Pacific Ry., on topography for construction of Dallas and Ft. Worth Belt Rys. *TT 0.8: SP 0.6: P 0.2: RC 0.2.* Jan. 1924 to Sept. 1925 Instrumentman, with Koch & Fowler, Cons. Engrs., in charge of party on subdivision work. *TT 1.7: SP 1: P 0.7: RC 0.7.* Sept. 1925 to Sept. 1926 Res. Engr. with C. L. Shaw, Contr., on Allen Bldg. at Dallas. *TT 1: P 1: RC 1.* Sept. 1926 to date Res. Engr. with Frank F. DuBose, Cons. Engr., on water and sewer extensions and improvements at Childress, Tex., and at present on sanitary sewer and water at Shamrock, Tex. *TT 0.8: P 0.8: RC 0.8. TT 7.7: SP 5: P 2.7: RC 2.7.* Refers to V. R. Brady, E. Couch, F. F. DuBose, J. D. Fowler, O. H. Koch, E. H. Morey, E. N. Noyes, R. W. Willard.

738

(10) **CONSTANTINE, EMILE WERNER**, 1112 Elm St., Birmingham, Ala. (Age 33. Born Zurich, Switzerland.) 1920 C. E., Eidgenossische Tech. Hochschule, Zurich, Switzerland. *TT 2: SP 2.* 1920 to 1921 Asst. Supt., Societe a Application du beton Arme, Paris, France, inspecting, supervision of reinforced concrete construction, etc. for Compagnie de Chemin de fer du Nord. *TT 0.8: P 0.8.* 1922 to 1923 Designing Engr., A. Perriere & Co., Paris, France, designing, estimating, construction plans, etc. for steam power plants. *TT 1.8: P 1.8: RC 0.7: D 1.1.* 1923 to 1925 Draftsman, Alabama Power Co., Birmingham, Ala., designing steam and hydro-electric power plants, substations. *TT 1.4: P 1.4: D 1.4.* 1925 to 1926 Asst. Designing Engr., Alabama State Docks Comm., designing reinforced concrete piers with steel sheds, cotton warehouse and compress tower. *TT 0.7: P 0.7: D 0.7.* 1926 to date Designing Engr. with R. L. Totten, Cons. Engrs., Birmingham, on water-works,

investigations for water and site for plants, specifications, inspection of construction, estimates of installation, etc. *TT 1.3: P 1.3: RC 1.3. TT 8.1: SP 2: P 6.1: RO 2.1: D 3.2.* Refers to O. H. Ammann, P. Bauman, R. L. Totten, I. A. Winter, J. H. Winter.

739

(1) **COOK, RUDOLPH**, 2059 Davidson Ave., Bronx, New York City. (Age 24. Born New York City.) Sept. 1922 to Feb. 1924 student, Stevens Inst. of Technology. *TT 0.3: SP 0.3.* Feb. 1924 to July 1925 Surveyor's Computer, Title Guarantee & Trust Co. *TT 1.5: SP 1.5.* July 1925 to March 1926 Timekeeper and Material Clerk, White Constr. Co., being Asst. to Field Engr. in charge of construction. *TT 0.7: SP 0.7.* March 1926 to date Jun. Engr., New York Central R. R. Co., as Transitman, Chf. of Party on preliminary survey and construction layout, Inspector in charge on steel foot-bridge, Asst. to Engr. in charge of duct lines, being in charge of one section. *TT 1.4: SP 0.4: P 1. TT 3.9: SP 2.9: P 1.* Refers to C. L. Barton, G. W. Gates, L. McHarg, J. J. O'Connor, C. L. Spaulding.

740

(2) **COPELAND, GEORGE ROGERS**, 532 Beacon St., Boston, Mass. (Age 22. Born Philadelphia, Pa.) 1927 B. S., Mass. Inst. Tech. Summers 1923 and 1924 Field Timekeeper, clerical work, and summers 1925 and 1926 Asst. to Supt., The Austin Constr. Co., Philadelphia, Pa. *TT 2: SP 2.* Refers to H. K. Barrows, W. M. Fife, E. F. Miller, C. M. Spofford, W. Steinbruch.

741

(14) **CORTELYOU, RUSHTON GARDNER**, 325 North Fourteenth St., Manhattan, Kans. Graduating student awarded Kansas State Section Prize. (Age 21. Born Manhattan, Kans.) 1927 B. S. in C. E., Kans. State Agri. Coll. Summer 1924 Concrete Worker with Walter B. Stengley, Manhattan, Kans. *TT 2: SP 2.* Refers to H. Allen, L. E. Conrad, F. F. Frazier, M. W. Furr, C. H. Scholer.

742

(9) **CREAL, HUGH RAYMOND**, Box 379, Frankfort, Ky. (Age 40. Born Buffalo, Ky.) 1924 B. S. in C. E., Univ. of Ky. *TT 2: SP 2.* Sept. 1912 to April 1913 Draftsman, W. E. Caldwell Co., Louisville, Ky. *TT 0.6: SP 0.6.* April 1913 to Jan. 1914 Rodman, Instrumentman and Draftsman, Pennsylvania R. R. *TT 0.7: SP 0.7.* Jan. 1914 to May 1915 Draftsman and Instrumentman, Louisville & Nashville R. R. *TT 1.3: SP 1.3.* May 1915 to Sept. 1917 Map Draftsman, Land Dept., Tennessee Coal, Iron & R. R. Co. *TT 2.3: SP 2: P 0.3: RC 0.3.* Sept. 1917 to Oct. 1918 Draftsman and Designer, Reinhart Donovan Co., on design and detail of concrete buildings. *TT 1.1: P 1.1: D 1.1.* Oct. 1918 to March 1919 Draftsman and Designer with Chester & Fleming, Superv. Engrs., on design, detail and map work for construction of Camp Henry Knox. *TT 0.4: P 0.4: D 0.4.* March 1919 to date (except Feb. to June 1924 student, Univ. of Kentucky) with State Highway Dept. of Kentucky engaged as follows: March 1919 to July 1920 Designer of highway bridges, etc.; July 1920 to Feb. 1924 and June to Sept. 1924 Asst. Bridge Engr. on supervision, design and plans in drafting office, 4 months Acting Bridge Engr.; since Sept. 1924 Bridge Engr. in charge of bridge office. *TT 7.7: P 7.7: RC 5: D 2.7. TT 16.1: SP 6.6: P 9.5: RC 5.3: D 4.2.* Refers to C. R. Bloxton, P. D. Gillham, J. C. Haskins, J. T. Madison, W. A. Newman, D. V. Terrell, E. N. Todd.

743

(2) **CROSS, RALPH UPTON**, 82 Foster St., Worcester, Mass. (Age 34. Born Worcester, Mass.) 1919 B. S. in C. E., Tufts Coll. *TT 2: SP 2.* July 1918 to Jan. 1919 Asst. to Officer in charge of inspection and expediting of materials, Constr. Div., U. S. Army, Washington, D. C. *TT 0.5: P 0.5.* June 1916 to June 1917 and Jan. 1919 to April 1927 with E. J. Cross Co., Worcester, Mass., on office and field supervision and (after Jan. 1919) Asst. to Pres., in charge of building construction. *TT 9.5: SP 4: P 5.5: RC 4: D 1.5. TT 12: SP 6: P 6: RC 4: D 1.5.* Refers to C. R. Bliss, J. A. Johnston, S. Lund, E. F. Miner, S. H. Pitcher, J. A. Tosi.

744

(10) **CRUTE, WILLIAM ROWZIE**, Canton, N. C. (Age 44. Born in Buckingham County, Va.) 1904 Mech. Engr., Va. Pol. Inst. *TT 2: SP 2.* 1904 to 1908 and 1914 to 1917 with Norfolk & Western Ry., as Asst. Engr. of Tests, at Roanoke, Va., tests on cement, structural steel, etc., Inspector on new material for rolling stock, and (after 1914) Chf. Steam Engr., Bluestone Power Station electrification, assisting on construction and operation of plant. *TT 6.3: SP 1.7: P 4.6: RC 2.8.* 1908 to 1914 Asst. Master Mechanic, Mathieson Alkali Works, Saltville, Va., being Engr. in charge of power plants and erection of machinery. *TT 6: SP 3: P 3: RC 3.* 1918 to 1919 Asst. Mech. Supt., Naval Aircraft Factory, U. S. Navy Yard, Philadelphia, Pa., being Asst. in charge of construction and design of plant and equipment. *TT 0.7: P 0.7: RC 0.7: D 0.2.* 1917 to 1918 and 1919 to date with Champion Fibre Co., Canton, N. C. until 1918 as Chf. Engr. acting as Supt. of operation of all power

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plants, and since 1919 Plant Engr. in charge of design and construction of plants. *TT 9: P 9: RC 8.7: D 8.2. TT 24: SP 6.7: P 17.3: RC 15.3: D 8.5.* Refers to J. A. Higgs, Jr., H. S. Parry, W. M. Peyton, J. E. Sirrine, C. E. Waddell.

745

(1) **CRUZ, MANUEL MARIAN**, 59 Garrison Ave., Jersey City, N. J. (Age 25. Born Quito, Ecuador.) Sept. 1922 to June 1925 student, Rensselaer Polytechnic Inst. *TT 1: SP 1.* Sept.-Dec. 1925 with Rand Constr. Co. of Boston, Mass., estimating and designing on building and construction work, revising specifications, etc. *TT 0.3: SP 0.3.* Jan. to April 1926 with J. A. Nally, Archt., Boston, estimating and designing residences, garages, small factories, etc., giving grades, leveling, property measurements, checking specifications. *TT 0.3: SP 0.3.* April to June 1926 Topographical Draftsman, Valuation Dept., Boston & Albany R. R. *TT 0.2: SP 0.2.* June-Aug. 1926 Office Asst. with F. L. Cranford and Chas. Locher, Inc., Subway Contrs., checking cost of materials. *TT 0.2: SP 0.2.* Sept. 1926 to date with North Jersey Transit Comm., as Topographical Draftsman, assisting designer of proposed electric lines from New York to New Jersey. *TT 0.6: SP 0.6. TT 2.6: SP 2.6.* Refers to E. R. Cary, J. F. Kunesch, W. P. Mason, J. C. Meem, G. S. Reeves.

746

(8) **CUNNINGHAM, HUGH TANQUARY**, 803 West Illinois St., Urbana, Ill. (Age 22. Born St. Francisville, Ill.) 1927 B. Sc., Univ. of Ill. Summer 1924 Timekeeper, Meredith Constr. Co., Indianapolis, Ind. Summer 1925 Layoutman and Inspector on dam construction. Jan. to May 1926 (part of time) drafting and computing, Univ. of Illinois. *TT 2: SP 2.* Refers to H. Cross, W. C. Huntington, G. W. Pickles, T. C. Shedd, C. C. Wiley.

747

(7) **CURTIS, DONALD DEXTER**, 1040 East Burlington St., Iowa City, Iowa. (Age 31. Born Greene, Iowa.) 1919 B. E., State Univ. of Iowa. *TT 2: SP 2.* Summer 1916 Rodman with Frank E. Cave, surveying and drainage work. Summer 1918 Instrumentman, and June 1919 to March 1920 Asst. Engr. M. of W., Cleveland, Cincinnati, Chicago & St. Louis Ry. *TT 0.7: SP 0.2: P 0.5.* March 1920 to March 1921 Structural Designer, Canfield Eng. Co., Des Moines, Iowa. *TT 1: P 1.* Sept. 1921 to date Instructor and Asst. Prof., State Univ. of Iowa, teaching engineering, chiefly in Dept. of Mechanics and Hydraulics. Summer 1925 Asst. Engr. with B. P. Fleming, Iowa City, Iowa, on design of Central heating and power plant for State Univ. of Iowa, structural engineering. Summer 1926 Asst., Iowa State Highway Comm., on assessment of property for pavement. *TT 5.9: P 5.9: RC 1. TT 9.7: SP 2.3: P 7.4: RC 1.* Refers to L. A. Canfield, B. P. Fleming, R. B. Kittredge, B. J. Lambert, J. Vawter, E. L. Waterman, C. C. Williams, S. M. Woodward.

748

(8) **CUSHING, JOHN FRANCIS**, 104 South Michigan Boulevard, Chicago, Ill. (Age 45. Born Arapahoe, Nebr.) 1906 C. E., Univ. of Notre Dame (Ind.) *TT 2: SP 2.* June 1907 to June 1908 Constr. Engr., J. J. O'Heron Constr. Co., Chicago, Ill. *TT 1: P 1: RC 1.* June 1908 to date with Great Lakes Dredge & Dock Co. as follows: June 1908 to Dec. 1910 Constr. Engr. on river and harbor improvements, etc.; Jan. 1911 to Jan. 1913 developing and in charge of cost systems on same work; Jan. 1913 to Jan. 1916 Div. Engr., Chicago; Jan. 1916 to Jan. 1922 Asst. Gen. Mgr., work on Lake Michigan, etc.; since March 1922 Pres. of Company. *TT 18.5: P 18.5: RC 18.5. TT 21.5: SP 2: P 19.5: RC 19.5.* Refers to D. J. Brumley, W. J. Cahill, L. H. Davis, A. J. Hammond, E. J. Kelly, E. S. Nethercut, H. Taylor.

749

(15) **DANIEL, ARTHUR FRANKLIN**, 6008 Junius St., Dallas, Tex. (Age 38. Born Dallas, Tex.) 1912 E. E., Univ. of Tex. *TT 2: SP 2.* June 1912 to Sept. 1914 Asst. Elec. Engr., Dallas Elec. Light & Power Co., laying out and estimating cost of extension, testing, etc. *TT 2.2: P 2.2: RC 2.2.* Jan. 1915 to Feb. 1926 Rodman, Instrumentman, in responsible charge and Asst. Engr. on paving, City Engr.'s office, Dallas, Tex. *TT 11.1: SP 2: P 9.1: RC 6.1: D 3.* Feb. 1926 to date Field Engr., Portland Cement Association, sales promotion. *TT 1.2: P 1.2: RC 1.2. TT 16.5: SP 4: P 12.5: RC 9.5: D 3.* Refers to F. N. Baldwin, C. A. Clark, O. H. Koch, W. H. Meier, E. N. Noyes, W. J. Powell, E. A. Wood.

750

(2) **DARLING, FAYETTE BEVANS**, 767 Main St., Worcester, Mass. (Age 25. Born St. Paul, Minn.) 1927 S. B., Mass. Inst. Tech. June 1927 to date Transitman, American Steel & Wire Co., South Works, Worcester, Mass. *TT 2: SP 2.* Refers to J. B. Babcock, 3d, W. L. Darling, C. M. Spofford.

751

(12) **DARWIN, ARCHIBALD GILBERT**, Indian Cache Ranch, Lewiston, Idaho. (Age 23. Born New York City.) 1927 B. S. in C. E., Univ. of Idaho. *TT 2: SP 2.* Summer 1920 Compassman, and June to Dec. 1921 and April to Aug. 1922 Rear Chainman, Clearwater

Timber Co., Lewiston, Idaho, on surveys. *TT 1: SP 1.* Summer 1923 Rodman, Winton Lumber Co. April to May 1924 Instrumentman and Computer, Nov. 1925 Asst. to Testing Engr., testing road materials and concrete aggregates, Sept. to Oct. 1926 Student Instructor in Freshman drafting, and May to June 1927 Instructor in topographic surveying, precise triangulation, etc., all at Univ. of Idaho. Summer 1924 Recorder and Field Draftsman, U. S. Dept. of Agriculture, Priest Lake, Idaho, on eradication project for white pine protection, Oct. to Dec. 1924 Field Asst. on pine studies, drafting, topographical surveys, Cheeky, B. C., Canada, and March-April 1925 Quarantine Inspector on plants of white pine blister rust, Pendleton (Ore.) quarantine station, all under Office Blister Rust Control. May to June 1925 Rodman, and June to Sept. 1925 Draftsman, Inland Power & Light Co., mapping property, surveys, etc. *TT 1.1: SP 1.1.* 1925 to date (spare time during college course) Instrumentman, Inspector, Computer and Checker on various surveys, construction of a hydro plant, etc.; also Associate Editor and Editor, *The Idaho Engineer* (student technical magazine). *TT 4.1: SP 4.1.* Refers to I. C. Crawford, M. R. Lewis, A. P. Ludberg.

752

(12) DAVIDSON, EDWARD WILLOUGHBY, Jr., 1605 East Forty-Seventh St., Seattle, Wash. (Age 24. Born Bakersfield, Cal.) 1927 B. S. in C. E., Univ. of Wash. June to Aug. 1926 with Henry & McFee Co., Seattle, Wash., field work on reinforced concrete pier at Puget Sound Navy Yard. *TT 2: SP 2.* Refers to W. F. Allison, C. W. Harris, C. C. More, W. F. Way.

753

(8) DAVIDSON, HAROLD NILS, 7625 Eggleston Ave., Chicago, Ill. Graduating student awarded Iowa Section prize. (Age 21. Born St. Paul, Minn.) 1927 B. S. in Civ. Eng., Iowa State Coll. *TT 2: SP 2.* Refers to T. R. Agg, R. A. Caughey, A. H. Fuller, F. Kereken.

754

(10) DAVIS, GEORGE BATTLEY, 1810 Twenty-Second Ave., Gulfport, Miss. (Age 21. Born Ridgeland, Miss.) 1927 B. E., Univ. of Miss. *TT 2: SP 2.* Refers to J. H. Dorroh, W. S. Hawkins.

755

(4) DAVIS, JOHN OBERLY, 900 Knox Ave., Easton, Pa. (Age 28. Born Easton, Pa.) 1920 B. S. in C. E., Lafayette Coll. *TT 2: SP 2.* June to Sept. 1919 Asst. Engr., Niagara Ry. Arch Bridge Co., Niagara Falls, N. Y., checking steel for reconstruction of bridge, drafting, instrument work, stream-gauge measurements, etc. June 1920 to March 1921 Asst. Engr., Punta Alegre Sugar Co., Punta San Juan, Camaguey, Cuba, in responsible charge of railroad layout and construction, topographical survey as Chf. or Party, collation of notes and mapping, design of reinforced concrete abutments. *TT 0.6: P 0.6: RC 0.6: D 0.3.* Sept. 1921 to date Maintenance Engr., J. T. Baker Chemical Co., Phillipsburg, N. J., in complete charge of installation and maintenance of apparatus, machinery, buildings, steam, water, oil and gas lines, foundation design, sketching and drafting. *TT 5.5: SP 1.5: P 4: RC 4: D 0.2.* *TT 8.1: SP 3.5: P 4.6: RC 4.6: D 0.3.* Refers to M. J. Backus, M. T. Bolmer, A. H. Fuller, J. McNeal, L. Perry, H. A. Reid, H. T. Spengler.

756

(10) DAVIS, PAUL DEXTER, Franklin Court Apartments, Durham, N. C. (Age 36. Born Fremont, N. C.) 1913 B. E., and 1922 C. E., N. C. State Coll. *TT 2: SP 2.* July 1913 to Nov. 1918 with Southern Bell Telephone & Telegraph Co., until Dec. 1913 as student at Atlanta, Ga., from Jan. to June 1914 and March 1916 to July 1917 Clerk, first in office of Supt. of Traffic at Charlotte, N. C., then in Eng. Dept., Atlanta, on population and traffic studies and estimates, operating rules, etc.; June 1914 to March 1916 and Aug. 1917 to Nov. 1918 Dist. Traffic Supt. of Eastern North Carolina at Raleigh, in charge of traffic and traffic organization. *TT 5.3: SP 4: P 1.3.* Nov. 1918-April 1919 in private practice with C. M. Lambe at Raleigh, on real-estate development and surveying. *TT 0.5: P 0.5: RC 0.5.* May 1919 to date Asst. Engr. with Wm. M. Piatt, Durham, N. C., on municipal and sanitary work acting as Res. Engr. on water-works and sewers at Zebulon and Wake Forest, N. C., design, plans, specifications, office supervision of construction, etc., of water-works, sewers, filter and sewage-disposal plants, paving, etc., in various cities in North Carolina, and at present on design of extension to activated sludge sewage-disposal plant for Gastonia, N. C. *TT 8.1: P 8.1: RC 8.1: D 6.1.* *TT 15.9: SP 6: P 9.9: RC 8.6: D 6.1.* Refers to J. L. Becton, C. L. Mann, H. E. Miller, W. M. Piatt, E. L. Scruggs, H. Tucker, D. M. Williams, O. Z. Wrenn.

757

(1) DAY, CHARLES LINCOLN, 203 Seventy-Ninth St., Brooklyn, N. Y. (Age 27. Born Brooklyn, N. Y.) Dec. 1918 to June 1922 with Montrose Morris Sons, Brooklyn, N. Y., successively as Gen. Draftsman, Steel Designer, Surveyer and Supt. of Constr., last 2½ years in charge of design and construction of industrial buildings. *TT 3.6 SP 1.7: P 1.9: RC 1.9: D 2.6.* June to Sept. 1922 Architectural Draftsman, with Holabird & Roche, Chicago, Ill., laying out and designing construction of commercial buildings. *TT 0.2: P 0.2:*

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RC 0.2: D 0.2. Oct. 1922 to date Engr., Johns-Manville Corporation, in charge of structural design and specifications, design and superintendence of erection of reinforced concrete and steel structures and supervision of tests on structural materials and tests of fluid flow through valves and orifices at elevated temperatures. TT 4.8: P 4.8: RC 4.8: D 4.8. TT 8.6: SP 1.7: P 6.9: RC 6.9: D 7.6. Refers to F. deS. Friel, B. J. Mansfield, R. H. Ruddell, R. R. Waddington, R. J. Warne.

758

(1) **de ANGUERA, HERMAN**, 347 Madison Ave., New York City. (Age 48. Born Wakefield, Mass.) 1902 B. S., Dartmouth Coll. 1918 B. D., Rochester Theological Seminary. TT 2: SP 2. Aug. 1902 to May 1904 with Louis E. Hawes, C. E., Boston, Mass., on survey and construction of city water supply, West Falmouth, Mass., measurements on Charles River, weir measurements, dam, etc., Needham Water Works, some office work, and after Nov. 1903 on West Falmouth steel standpipe and observatory, 12-in. water main. TT 1.8: SP 0.8: P 1: RC 0.8: D 0.2. June to Sept. 1904 with Hastings Pavement Co., paving, Staten Island and Bronx. TT 0.3: P 0.3: RC 0.3. Sept. 1904 to Feb. 1905 with L. E. Hawes on pipeline for mountain spring water, Housatonic, Mass. TT 0.5: P 0.5: RC 0.5. April 1905 to March 1906 with U. S. Govt., West Point, N. Y., as Instrumentman on topographical survey (2 000 acres). TT 1: P 1. April 1906 to Aug. 1907 with Lloyd Collis, Inc., New York City, as Chf. Engr. on 20-in. pipe line and dam, 6 miles through mountains. TT 1.3: P 1.3: RC 1.3. 1912 and 1915 at Worcester, Mass., on survey and map of 5-acre camp, survey of new building site and plans for development. TT 0.3: P 0.3. May 1917 to Feb. 1918 Supt. of Constr., N. E. Dept., National War Work Council, built 40 Y. M. C. A. huts. TT 1.1: P 1.1: RC 1.1: D 0.8. 1918 to 1921 (about one-half of time) on development of 25-acre international campsite in Piripolis, Uruquay, including surveys, maps, 27-m. well, water and sewer systems, buildings, grounds, trees, and electric lighting. TT 1.5: P 1.5: RC 1.5: D 1.5. Oct. 1923 to date on development of land and construction of concrete frame and masonry Y. M. C. A. building (total \$500 000), being Constr. Engr. supervising details of plans, design and installation of well, piping, filters, tanks, pumps, for swimming pool installation and construction in concrete and tile, surveys, etc. TT 3.6: P 3.6: RC 3.6: D 3.6. TT 13.4: SP 2.8: P 10.6: RC 9.1: D 6.1. Refers to R. Fletcher, H. C. Hill, M. J. Leahy, H. E. Plumer, J. E. Porter, C. A. Studwell, A. C. Tozzer.

759

(13) **DeMARTINI, FRANK EDWARD**, 637 Greenwich St., San Francisco, Cal. (Age 22. Born San Francisco, Cal.) 1927 B. S., Coll. of Civ. Eng., Univ. of Cal. TT 2: SP 2. Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, C. G. Gillespie, H. F. Gray, C. G. Hyde, G. E. Troxell.

760

(1) **DENHAM, WARING**, 107 Claremont Ave., New York City. (Age 19. Born New York City.) May 1924 to Nov. 1925 Chainman and Rodman, New York Central R. R. Co. TT 1.2: SP 1.2. March to Aug. 1926 Transitman with Norman P. Gerhard, Inc., Scarsdale, N. Y. TT 0.5: SP 0.5. Jan. to March 1926 Rodman, and Aug. to Dec. 1926 Res. Engr., with W. W. Young, Cons. Engr. for Westchester County San. Sewer Comm., White Plains, N. Y. TT 0.5: SP 0.5. March 1927 to date Transitman, Village Engr.'s Office, Rye, N. Y. TT 0.2: SP 0.2. TT 2.4: SP 2.4. Refers to A. W. Coombs, G. W. Gardner, N. P. Gerhard, A. Lau, J. G. Wise.

761

(2) **DIRLAM, ARLAND AUGUSTUS**, 52 Crescent Ave., Malden, Mass. (Age 21. Born Somerville, Mass.) 1926 B. S. in C. E., Tufts Coll. TT 2: SP 2. Refers to C. W. Killam, R. W. Lefavour, E. H. Wright.

762

(10) **DOBBINS, EARL GEORGE**, Box 309, Chapel Hill, N. C. (Age 21. Born Caroleen, N. C.) 1927 B. S., Univ. of N. C. TT 2: SP 2. Refers to G. M. Braune, H. F. Janda.

763

(4) **DONNELLY, PHILIP FRANCIS**, 11 Second St., Bordertown, N. J. (Age 34. Born Bordertown, N. J.) Prof. Engr. and Land Surveyor, State of New Jersey. Oct. 1911 to June 1921 and Nov. 1925 to June 1926 with American Bridge Co., Trenton, N. J., 4 years as Apprentice Draftsman, tracing and detailing structural steel, and remainder of time Structural Draftsman detailing, checking details and designs of subways, buildings, bridges, elevated railroads and caissons, vehicular tunnel, New York-New Jersey (New York Side). TT 10.4: SP 4: P 6.4: RC 0.7: D 3.7. July 1921 to June 1924 Structural Engr., State of New Jersey, in responsible charge of surveys and estimates for assessments (1 year) of design of structural steel for New Jersey state buildings (about 4 months), and of surveying, planning and checking designs of bridges and approaches for railroad grade-crossing eliminations, inspections and checking designs of railroad and railway bridges and checking and

posting maximum loading for toll bridges over Delaware River (nearly 1½ years). *TT 3: P 3: RC 3: D 3.* July 1924 to Nov. 1925 Structural Engr., U. S. Cast Iron Pipe & Foundry Co., Burlington, N. J., in responsible charge; designed one building at Anniston, Ala. and two at Chattanooga, Tenn., and supervised construction of buildings in field, also designed bridge (trolley and roadway) over Pennsylvania R. R. at Burlington, N. J. *TT 1.3: P 1.3: RC 1.3: D 0.5.* June 1926 to date Structural Draftsman, Pennsylvania R. R., designing preliminary studies of Philadelphia Improvements. Since June 1925 also City Engr. of Bordentown, N. J. *TT 1: P 1: RC 1: D 1. TT 15.7: SP 4: P 11.7: RC 6: D 8.2.* Refers to C. L. Appleton, R. Farnham, S. H. Noyes, C. P. Schantz, T. P. Watson, A. R. Willson.

764

(9) DOYLE, CONAN JEROME, 415 Brown St., Dayton, Ohio. (Age 24. Born Aurora, Ind.) 1927 B. S. in C. E., Univ. of Dayton. Summer 1925 and Dec. 1926 to Jan. 1927 Eng. Inspector, on highway and sewer, City of Dayton, Ohio. *TT 2: SP 2.* Refers to J. F. Hale, B. T. Schad.

765

(13) DRESSER, THEODORE PARKER, Jr., 2518 Hillcourt, Berkeley, Cal. (Age 39. Born Medford, Mass.) 2½ years student in mining, Univ. of California. Prior to Jan. 1912 (2½ years) successively Rodman, and Chainman, Levelman, Draftsman, Transitman and (4 months) Steel Mill Inspector, with Massachusetts Harbor & Land Comm., and (4 months) with a building contractor. *TT 2.8: SP 1.6: P 1.2: RC 0.3.* Jan. 1912 to June 1917 engaged as follows: 1912 surveying and on concrete pier construction, California State Harbor Comm.; 1913 on preliminary estimates at Panama Pacific Exposition, San Francisco, Cal.; Jan. to June 1914 and Aug. 1916 to June 1917 with Smith, Emery Co., as inspector of street construction, material and machinery, concrete mix design, etc., and (after Aug. 1916) in charge of inspection and engineering laboratory; June to Dec. 1914 Inspector on concrete outfall sewer construction, Berkeley, Cal.; Jan. to Aug. 1915 with R. C. Storrie Co., Contra., on Twin Peaks Tunnel, San Francisco; Aug. 1915 to Aug. 1916 Inspector, R. E. Noble & Co., on building and street construction, etc., concrete mix design and control laboratory work. *TT 5.5: SP 1: P 4.5: RC 3.5: D 2.5.* July 1917 to Feb. 1924 Chf. Engr. and Mgr., R. E. Noble & Co. (Abbott A. Hanks, Prop.), and Feb. 1924 to date Chf. Engr., Abbott A. Hanks, Inc., Cons., Inspecting, Testing and Chemical Engrs.; in charge of field inspection on buildings, bridges, dams, highways, railroad and other equipment, pipe, mill and shop inspections, supervising engineering laboratory, investigations and tests of structural materials; Concrete Technologist, design and control of concrete, including mixes, etc.; investigation and consultation on development of gravel and rock properties and operating plants; examination and consultation on condition of materials in structures; research in cement, concrete, aggregates, etc.; work included design of over 1100 concrete mixes, charge of or consulting on inspection of over 800 structures, including Standard Oil Bldg. (23 stories), Hunter-Dulin Bldg. (22 stories), Russ Bldg. (30 stories) all in San Francisco; 14 dams in California such as Bullards Bar and Exchequer Dams and Feather River Power Project, Dumbarton Bridge over San Francisco Bay, West Spokane St. Bascule Bridge, Seattle, Wash., etc. *TT 9.8: P 9.8: RC 9.8: D 9.8. TT 18.1: SP 2.6: P 15.5: RC 13.6: D 12.3.* Refers to G. H. Binkley, H. J. Brunnier, A. P. Denton, H. D. Dewell, R. C. Hackley, W. L. Huber, L. R. Jorgensen, A. Kempkey, L. H. Nishkian, C. H. Snyder.

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(4) DUNCAN, CHESTER IRVING, 3644 Taylor Ave., Drexel Hill, Pa. (Age 34. Born Philadelphia, Pa.) 1913 to 1914 Draftsman with Wm. H. Gravell, Philadelphia, Pa., on power plants, towers and buildings. *TT 1: SP 1.* 1914 to 1917 with Dept. of City Transit, Philadelphia, as Designer of subway and elevated structures, and (about 9 months) supervising steel erection on Frankfort Elevated, under M. Golder. *TT 3: P 3: RC 0.8: D 2.2.* 1917 to 1920 Engr., American International Shipbuilding Corporation, Hog Island, Pa., work included design of shipways, piers, docks, dykes, railroad trestles, steel and concrete buildings and towers. *TT 3: P 3: RC 1: D 2.* 1920 to 1922 Engr., U. S. Shipping Board, Emergency Fleet Corporation, Hog Island, in charge of preparation of catalogue of ship parts and equipment, including appraisals. *TT 2: P 2: RC 2.* 1922 to date Engr. with Wm. H. Gravell, in charge of design and plans for buildings and structures, including B. P. O. Elks Bldg., Penn Athletic Club, Lehigh Silk Hosiery Mills, Fidelity Mutual Life Insurance Co., double decking of Franklin Field, all in Philadelphia, St. Charles Borromeo Seminary, Overbrook, Bryn Mawr Hospital, Hartford County Court House, etc. *TT 5: P 5: RC 5. TT 14: SP 1: P 13: RC 8.8: D 4.2.* Refers to C. L. Appleton, M. Golder, W. H. Gravell, H. H. Quimby, H. A. Schofield, C. H. Stevens, P. H. Wilson.

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(4) DUNHAM, CLARENCE WHITING, 621 Sixteenth Ave., Bethlehem, Pa. (Age 35. Born Southington, Conn.) 1920 C. E., Rens. Pol. Inst. *TT 2: SP 2.* 1920 to 1923 Instructor, Dept.

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of Mechanics, Rensselaer Polytechnic Inst. *TT 2.8: P 2.8.* June 1923 to date with Bridge and Fabrication Dept., Bethlehem (Pa.) Steel Co., until Dec. 1925 as Asst. on engineering, etc., and assisting Engr. in Chg. of structural drawing room; since then Asst. Chf. Draftsman, in charge of detail shop drawings for structural steel bridges; since 1923 also conducted Dept.'s night school and acted as Chairman of Committee on Standards. *TT 3.9: P 3.9: RC 1.4. TT 8.7: SP 2: P 6.7: RC 1.4.* Refers to L. W. Clark, L. M. Entrekin, W. A. Hazard, T. R. Lawson, C. H. Mercer, P. C. Ricketts, A. J. Willis.

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(1) **DURKIN, FRANK JOSEPH**, 3293 Perry Ave., New York City. (Age 22. Born New York City.) 1927 B. S. in C. E., Manhattan Coll. Summer 1926 Draftsman and Estimator with Warren & Wetmore, New York City, on building sketches, quantity estimating, etc. *TT 2: SP 2.* Refers to P. M. Corry, J. J. Costa.

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(14) **DYER, GARVIN HENRY**, 1321 North Concord Ave., Springfield, Mo. (Age 22. Born Ash Grove, Mo.) Studying municipal engineering with International Correspondence School. June 1923 to date with Springfield City Water Co., until June 1924 as Draftsman, and since then Asst. Engr., acting as Rodman and Instrumentman on surveys, Asst. Engr. on concrete foundation and pipe-laying, keeping construction records, drafting, being Gen. Asst. to Supt. and Constr. Engr. *TT 4: SP 4.* Refers to P. Burgess, W. J. Gray, F. D. Hughes, A. H. Kindrick, H. P. Mobberly.

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(11) **EAGER, WILLIAM LYLE**, 950 Marine St., Boulder, Colo. Graduating student awarded Colorado Section prize. (Age 23. Born Arapahoe, Nebr.) 1927 B. S. in C. E., Univ. of Colo. *TT 2: SP 2.* Refers to F. R. Dungan, C. L. Eckel, H. J. Gilkey.

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(2) **EDWARDS, ATHOLE BRAND**, 4 West Cedar St., Boston, Mass. (Age 48. Born Hemmingford, Quebec, Canada.) 1897 to 1901 student in general science, economics, etc., Harvard Univ. (Coll.) 1901 to 1917 with Illinois Central R. R. Co. until 1905 as Track Apprentice, Rodman and Instrumentman; 1905 to 1906 Asst. Engr. in charge of maintenance; 1906 to 1907 Res. Engr. on construction of new lines; 1907 to 1912 Masonry Inspector on bridges; 1912 to 1917 Asst. Engr. on surveys, estimates and construction of bridges. *TT 14.4: SP 5.5: P 8.9: RC 8.9.* 1917 to 1918 Salesman, Massey Concrete Products Corporation. *TT 1: P 1: RC 1.* 1918 to 1919 Track Engr., Supervisor of production, Ordnance Dept. and U. S. Army (civilian service). *TT 1: P 1: RC 0.4: D 0.6.* 1919 to 1924 (except 6 months in 1921 City Mgr., St. Albans, Vt.) not on engineering work. *TT 0.5: P 0.5: RC 0.3: D 0.2.* 1924 to date Asst. Engr., Div. of Metropolitan Planning, Commonwealth of Massachusetts. *TT 3.1: P 3.1: D 3.1. TT 20: SP 5.5: P 14.5: RC 10.6: D 3.9.* Refers to W. G. Addis, C. I. Anderson, C. W. Banks, C. R. Berry, G. W. Cutting, Jr., C. Gilman, M. Johnson, F. R. Judd, E. H. Rogers, C. C. Westfall.

772

(1) **EDWARDS, JOHN GRENFELL**, Hotel Manger, 50th St. and Seventh Ave., New York City. (Age 44. Born Truro, Cornwall, England.) 1903 M. E., Redruth School of Mines, England. 1903 to 1906 mining in collieries in South Wales and England. *TT 3: SP 3.* 1906 to 1909 Millman and Metallurgical Chemist, Mysore Gold Min. Co., South India. *TT 3: SP 1.5: P 1.5.* 1909 to 1910 Asst. Mine Surveyor, East Pool & Wheat Agar Mine, Cornwall, England. *TT 1: P 1.* 1910 to 1911 Asst. Mine Surveyor, laying out construction and mapping, City Deep Gold Min. Co., Johannesburg, South Africa. *TT 1: P 1.* Feb. 1911 to Sept. 1913 Mine Surveyor, Chemist and Gen. Engr. in charge during development and construction of the mine, Messina (North Transvaal) Development Co., Ltd. *TT 2.6: P 2.6: RC 2.6.* March 1914 to Sept. 1915 Supt., Curacao Min. Co., West Indies, in charge of mining operations, construction of buildings, installation of ropeways and machinery, self-acting inclines, building wharves, etc. *TT 1.6: P 1.6: RC 1.6: D 0.5.* Nov. 1915 to Dec. 1918 Lieut. and Capt., Royal Engrs., in France, tunnelling, building bridges and demolition work. *TT 3: SP 1: P 2: RC 2.* 1919 to April 1922 prospecting in Spain. *TT 3: SP 3.* April 1922 to May 1923 Engr., Compagnie Generale des Colonies, Senegal, Africa, installation and administration of irrigation and draining systems for cotton fields; experimental work for French Govt. *TT 1.1: P 1.1: RC 1.1.* April 1924 to April 1925 Engr., Poderosa Min. Co., Chile, in charge of laying out work, supervised Surveying and Assaying Depts. *TT 1: P 1: RC 1.* May 1925 to April 1927 Transimian and Engr., Chile Exploration Co., laying out and supervising construction of leaching and solution concrete vats, foundations and erection of structural steel for two turbines (3 000 and 20 000 kw.), four boilers (1 400 h.p.), oil tank (80 000 bbl.), buildings, etc. *TT 2: P 2: RC 2: D 0.5. TT 22.3: SP 8.5: P 14.8: RC 10.3: D 1.* Refers to R. E. Baylor, H. M. Dougherty, E. D. Meyer, B. Rasmussen, W. E. Rudolph.

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(1) **EMM, WALTER WILFRED**, 3 Old Edinburgh Road, Inverness, Scotland. (Age 28. Born Whitehaven, Eng.) 1924 B. S. E., Glasgow Univ., Scotland. *TT 2: SP 2.* Aug. 1917 to Oct. 1920 Apprentice Engr. Fitter, Plater and Shipwright, and one summer (while student) Apprentice Draftsman, Rose St. Foundry, Eng. & Shipbuilding Co., Ltd., Inverness, Scotland. *TT 3.2: SP 3.2.* June 1924 to Jan. 1926 Ship Draftsman, Fairfield Shipbuilding & Eng. Co., Ltd., Govan, Glasgow, on steelwork and arrangement plans for liners. *TT 1.5: SP 0.5: P 1: D 1.* March 1923 to June 1925 Cons. Naval Archt., Isles of Scilly Steamship Co., Ltd., some design, including vessel 170 ft. long to suit flower trade, tidal harbors, etc. *TT 1: P 1: D 1.* Jan. 1926 to date Jun. Asst. Engr., The Inverness-shire County Council, levelling, 4½ months preparing contract drawings, etc., and since Aug. 1926 Jun. Asst. to Res. Engr. on section of road. *TT 1.4: SP 1.4. TT 9.1: SP 7.1: P 2: D 2.* (Applies in accordance with Sec. 1, Art. 1 of the By-Laws.)

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(5) **EMMONS, WALTER JOHNSON**, 816 Shepard St., N. W., Washington, D. C. (Age 37. Born Hope, R. I.) 1912 Sc. B. in Civ. Eng., Brown Univ. 1914 A. M. in Highway Eng., Columbia Univ. *TT 2: SP 2.* July to Dec. 1912 Rodman, New York, New Haven & Hartford R. R. *TT 0.4: SP 0.4.* Dec. 1912 to April 1913 and Dec. 1913 to April 1914 graduate student, Columbia Univ. *TT 0.5: P 0.5.* April 1913 to May 1916 Constr. Foreman, United Gas Improvement Co., Philadelphia, Pa., maintenance of macadam and gravel roads by bituminous-surface treatment, construction and reconstruction of bituminous penetration macadam roads, laboratory research studies of tar products. *TT 2.8: P 2.8: RC 0.5.* May 1916 to Nov. 1919 (except 8 months with U. S. Army) Inspector and Asst. Engr., Pennsylvania State Highway Dept., Harrisburg, Pa., supervision of production of road-building materials and of asphalt paving mixtures. *TT 2.8: P 2.8.* Nov. 1919 to Sept. 1920 Asst. to Director, Dept. of Roads and Pavements, Pittsburgh Testing Laboratory, Birmingham, Ala., in charge of operation of bituminous testing laboratory, approval of materials, design of bituminous paving mixtures and responsible for bituminous pavements. *TT 0.8: P 0.8: RC 0.8: D 0.8.* Sept. 1920 to Feb. 1924 Prof. of Highway Eng., Agricultural and Mechanical Coll. of Texas. *TT 3.4: P 3.4: RC 3.4.* Feb. 1924 to date Highway Research Specialist, Bureau of Public Roads, Washington, D. C., in charge of bituminous pavement research and of bituminous materials-testing laboratory. *TT 3.2: P 3.2: RC 3.2: D 3.2. TT 15.9: SP 2.4: P 13.5: RC 7.9: D 4.* Refers to J. Adler, W. L. Caldwell, C. D. Curtiss, A. T. Goldbeck, E. F. Kelley, R. L. Morrison, J. C. Nagle, J. J. Richey.

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(10) **EPSTEIN, ALEXANDER**, Walterboro, S. C. (Age 28. Born New York City.) Student at Citadel (Mil. Coll.), Charleston, S. C. (1915 to 1917) and special course in engineering, South Carolina State Univ. (1920 to 1921). *TT 1: SP 1.* Aug. 1917 to May 1919 Rodman, Chainman, Materialman and Recorder on survey party, U. S. Navy Dept., Charleston, S. C., and Philadelphia, Pa. *TT 1.3: SP 1.3.* Jan. to Sept. 1920 Inspector on dredging, U. S. Engrs., Charleston. *TT 0.8: SP 0.8.* June to Sept. 1921 Rodman, South Carolina Highway Dept. *TT 0.3: SP 0.3.* Oct. 1921 to Jan. 1922 and May to Aug. 1923 Inspector on sewer construction for City Engr., Charleston. *TT 0.5: SP 0.5.* Jan. to May 1923 Compassman on timber survey, Burton Lumber Co. *TT 0.3: SP 0.3.* Sept. 1923 to Jan. 1924 Instrumentman, Davis Constr. Co., on sewer work at Lamar, S. C. *TT 0.3: SP 0.3.* June 1924 to date with Lee, Murray & Palmer as Draftsman, Instrumentman and Asst. Res. Engr. on highway construction. *TT 3: SP 1.5: P 1.5: RC 1.5. TT 8: SP 6.5: P 1.5: RC 1.5.* Refers to J. H. Dingle, T. K. Legare, J. W. Martin, F. H. Murray, J. L. Parker, B. M. Thomson.

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(12) **ERICKSON, ARCHIE MILTON**, Deep River, Wash. (Age 22. Born Astoria, Ore.) 1927 B. S. in C. E., Univ. of Wash. Summer 1924 Rodman, and Summer 1925 Chainman, Deep River Logging Co. *TT 2: SP 2.* Refers to W. F. Allison, I. L. Collier, J. B. Hamilton, C. W. Harris, C. C. More.

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(6) **ERWIN, FRANK JACKSON**, 1629 Washington St., Charleston, W. Va. (Age 23. Born Rancoverve, W. Va.) 1927 B. S. in C. E., W. Va. Univ. *TT 2: SP 2.* Refers to L. V. Carpenter, R. P. Davis.

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(14) **EVANS, HERBERT BEALES**, 421 West Harvey St., Wellington, Kans. (Age 22. Born Wellington, Kans.) 1927 B. S. in C. E., Kans. State Agri. Coll. Summer 1926 Chainman, Atchison, Topeka & Santa Fe Ry. Co. *TT 2: SP 2.* Refers to H. Allen, L. E. Conrad, F. F. Frazier, M. W. Furr, C. H. Scholer.

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(I) **FERRER, MANUEL RIVERA**, Box 710, San Juan, Porto Rico. (Age 45. Born Aquadilla, Porto Rico.) 1905 B. S. in Civ. Eng., Purdue Univ. TT 2: SP 2. June 1905 to June 1909 Asst. Engr., and Jan. 1911 to Jan. 1913 Engr., Govt. of Porto Rico, on road location, construction and maintenance. TT 6: SP 0.5: P 5.5: RC 4: D 2. June 1909 to Dec. 1910 City Engr., Mayaguez, Porto Rico, on water-works design and construction. TT 1.5: P 1.5: RC 1: D 0.5. Jan. 1913 to Jan. 1916 Supt. of Public Works, Govt. of Porto Rico. TT 3: P 3: RC 2: D 1. Jan. 1921 to April 1923 City Engr., San Juan, Porto Rico, on water works, sewer construction and design. 1916 to 1921 and 1923 to date in contracting business and travelling. TT 2.3: P 2.3: RC 2.3. TT 14.8: SP 2.5: P 12.3: RC 9.3: D 4.5. Refers to M. V. Domenech, R. A. Gonzalez, A. S. Lucchetti-Otero, A. Rodriguez, E. Totli y Torres.

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(I) **FEXY, GEORGE DEMETRIUS**, 1767 Sixty-First St., Brooklyn, N. Y. (Age 23. Born in Smyrna.) 1927 S. B., Mass. Inst. Tech. TT 2: SP 2. Jan. to April 1923 Inspector, Western Elec. Co., on wire diagrams for machine switching operations. TT 0.3: SP 0.3. Sept. to Dec. 1923 Draftsman, Brooklyn Edison Co., installing house service. Summer 1924 Draftsman, New York Edison Co., on duct and pipe design. Summer 1926 Draftsman, Board of Transportation, New York City, on sewer construction for subways. TT 0.3: SP 0.3: D 0.3. TT 2.6: SP 2.6: D 0.3. Refers to J. B. Babcock, 3d, H. K. Barrows, C. M. Spofford.

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(II) **FIELD, EUGENE VICTOR**, 1585 Corson St., Pasadena, Cal. (Age 39. Born New York City.) 1906 to 1908 Instrumentman, Grand Trunk Pacific Ry. TT 2: SP 2. 1909 to 1915 in private practice of land surveying at New Brunswick, Canada. TT 6: P 6: RC 6. 1916 to 1917 Asst. Engr., Chicago (Ill.) Junction Ry., on maintenance, valuation, surveys, etc. TT 1.5: P 1.5: RC 1. 1917 to 1918 Asst. Engr., Chicago, Milwaukee & St. Paul Ry., Chicago, on maintenance, design of terminal facilities, etc. TT 0.9: P 0.9: RC 0.9: D 0.5. 1918 with Stone & Webster, Grand Rapids, Mich., on location, construction and design of railroad facilities in connection with U. S. Govt. picnic acid plant. TT 0.2: P 0.2: RC 0.2: D 0.2. 1918 to 1927 with C. J. Ry., and Central Mfg. Dist., Chicago, as Asst. Engr. and Asst. to Chf. Engr., on design, construction and maintenance of railway terminal and municipal facilities. TT 8.9: P 8.9: RC 8.9: D 5. At present Civ. Engr. with C. R. Sumner, Los Angeles, Cal., on subdivisions, roadwork, surveys. TT 0.2: P 0.2: RC 0.2: TT 19.7: SP 2: P 17.7: RC 17.2: D 5.7. Refers to A. Epstein, H. Hawgood, A. G. Holt, O. Rittmaster, C. R. Sumner.

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(IO) **FISH, EDWARD ARTHUR**, 125 Georgia Ave., Barnesville, Ga. (Age 35. Born Williamsburg, Ky.) July 1910 to Aug. 1914 Rodman and Instrumentman, Louisville & Nashville R. R. Co. TT 4: SP 4. Sept. 1914 to June 1918 Instrumentman, and Feb. 1919 to Aug. 1920 Instrumentman and Bridge Inspector, Southern Ry. Co. TT 4.3: SP 4.3. June 1918 to Feb. 1919 with U. S. Army. Aug. 1920 to date with State Highway Dept. of Georgia (2½ years) as Location Engr., then Res. Engr. on construction and location. TT 6.8: P 6.8: RC 6.8: D 3.8. TT 15.1: SP 8.3: P 6.8: RC 6.8: D 3.8. Refers to R. E. Adams, W. R. Neel, H. M. Pafford, C. L. Rhodes, E. N. Seymour, S. B. Slack.

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(9) **FISHER, GEORGE J.**, 25 North Ferry St., Schenectady, N. Y. (Age 24. Born Eaton, Ohio.) 1927 B. S., Antioch Coll. Summers 1921-1926 and Nov. 1922 to Feb. 1923 (except 5 weeks) Rodman, Instrumentman and Asst. Engr., Ohio State Highway Dept., on line, grade, etc., for new pavements and bridges, surveys, drafting, inspection, etc. Oct. 1921 to Jan. 1922 (except 5 weeks) Chainman, Miami Conservancy Dist., Dayton, Ohio. TT 2: SP 2. Refers to A. E. Morgan, P. C. Nash.

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(I) **FLANNAGAN, OSCAR BROADUS**, Monte No. 377, Havana, Cuba. (Age 30. Born Lynchburg, Va.) 1926 C. E., Univ. of Va. TT 2: SP 2. June 1915 to Sept. 1918 Draftsman, until Sept. 1916 with Covington (Va.) Machine Co., on punching and shearing machinery, then with Virginia Bridge & Iron Co., Roanoke, Va., tracing and detailing structural steel for mill buildings and after June 1917 with American Steel Co. of Cuba, Havana, Cuba, detailing and checking shop drawings for mill buildings. TT 3.3: SP 3.3. Sept. 1918 to June 1919 student, Univ. of Virginia, except 3 months with S. A. T. C., U. S. Army. June 1919 to June 1920 Draftsman and Designer, American Steel Co. of Cuba, detailing and checking and later assisting Designer of office and mill buildings, designing and estimating weights. TT 1: SP 0.5: P 0.7. June 1920 to March 1922 with Marino Diaz, Archt. and Engr., Havana, Cuba, as Designer of structural steel frames for a brewery, a soap factory, and apartments, offices, etc. TT 1.8: P 1.8. March 1922 to Sept. 1923 with

Eudaldo Geli foundry and structural shop as Engr. in Chg. of design, mill and office buildings. *TT 1.5: P 1.5: D 1.5.* Sept. 1923 to June 1926 student, Univ. of Virginia. Summers designing for Gelestino Joaristi y Cia, Havana. June 1926 to date Engr. in Chg. with Celestino Joaristi y Cia; at present in charge of Structural Steel Dept.; in responsible charge and does designing on buildings and bridges, estimating and price setting. *TT 1: P 1: D 1. TT 10.6: SP 5.6: P 5: D 2.5.* Refers to R. H. Cady, M. Diaz Quinones, C. C. Fitz Gerald, M. A. Rue. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(5) **FOCHT, RALPH GARFIELD**, 2633 Adams Mill Road, Washington, D. C. (Age 46. Born Lockport, Ill.) 1906 B. S. in M. E., and 1910 M. E., Armour Inst. Tech. *TT 2: SP 2.* Jan. 1902 to Oct. 1903 Supt. of municipal electric light plant, Lockport, Ill. *TT 1.7: SP 0.2: P 1.5: RC 1.5.* Aug. 1906 to Nov. 1909 Draftsman, Peoples Gas, Light & Coke Co. of Chicago, and subsidiary companies, on structural steel and concrete design for mill and factory construction, etc.; part of time on construction. *TT 3.2: SP 3.2.* Nov. 1909 to date Structural Engr., Office of Superv. Archt., Treasury Dept., Washington, D. C., on structural design and in responsible charge of many important government buildings and projects; also criticizes structural drawings and investigates completed buildings as to strength, alterations, extensions, etc. *TT 18: P 18: RC 9: D 9. TT 25: SP 5.5: P 19.5: RC 10.5: D 9.* Refers to W. S. Anderson, W. P. Darwin, F. C. Hilder, T. W. Marshall, N. A. Melick, E. C. Ruebsam.

786

(1) **FORTUNO-SELLES, FRANCISCO**, Concordia 12, Santurce, Porto Rico. (Age 34. Born San Lorenzo, Porto Rico.) Dec 1913 to Oct. 1916 Engr., Central Eureka, Inc., land and irrigation surveys, narrow-gauge railroad location and construction. *TT 2.8: SP 1.5: P 1.3: RC 1.3.* March 1917 to Feb. 1921 Transitman, Draftsman, Asst. Engr. and Asst. Chf. Engr., Dept. of Interior, San Juan, Porto Rico, on drafting, bridge design, road location, design and construction, acting as Asst. Constr. Engr. *TT 4: SP 2.5: P 1.5: D 0.5.* March 1921 to April 1922 Asst. Engr., City of San Juan, on design of sewerage systems. *TT 1.2: P 1.2: D 1.2.* May 1922 to date with Dept. of Interior, Porto Rico until March 1923 as Asst. Constr. Engr., acting as Asst. to Chf. Engr., on road and bridge construction, then Asst. Chf. Engr., Bureau of Municipal Works, supervising design and construction of water and sewerage systems, and street paving, and after Aug. 1923 Constr. Engr., Bureau of Public Works, in charge of road and bridge construction in Porto Rico. *TT 5.2: P 5.2: RC 4.1: D 0.5. TT 13.2: SP 4: P 9.2: RC 5.4: D 2.2.* Refers to M. Font, R. A. Gonzalez, F. Levy-Gonzalez, A. S. Lucchetti-Otero, R. Ramirez, E. Totti y Torres.

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(2) **FOWLER, HENRY CHARLES, Jr.**, 191 Audubon Rd., Boston, Mass. (Age 22. Born Springfield, Mass.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to H. K. Barrows, C. B. Breed, C. M. Spofford.

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(7) **FREEMAN, RONALD MELVILLE**, Gratiot Ave., Roseville, Mich. (Age 25. Born Coldwater, Mich.) Registered Civ. Engr., State of Michigan. 1925 B. S. in C. E., Univ. of Mich. *TT 2: SP 2.* Feb. 1925 to April 1927 with Hoad, Decker, Shoecraft & Drury, Ann Arbor, Mich., as Designer and Draftsman preparing plans for sewerage systems, sewage-disposal plants and pumping stations, and (about 10 months) Res. Engr. on construction of trunk and intercepting sewers, pumping station and Imhoff tanks for City of Adrian, Mich. (Aug. to Dec. 1925) and sanitary sewers for Ypsi-Am. Land Co., Ypsilanti, Mich. (May to Nov. 1926). *TT 2.1: SP 0.7: P 1.4: RC 0.8: D 0.7.* April 1927 to date Asst. City Engr., Roseville, Mich., office and field work for sidewalks and preliminary survey and design of contaminated water supply from Detroit for Roseville. *TT 0.1: P 0.1: RC 0.1. TT 4.2: SP 2.7: P 1.5: RC 0.9: D 0.7.* Refers to A. J. Decker, W. R. Drury, W. C. Hoad, R. L. McNamee, E. C. Shoecraft.

789

(1) **FREITAS VALLE FILHO, JOSE DE**, Sherman Sq. Hotel, New York City. (Age 23. Born Sao Paulo, Brazil.) 1926 C. E., Escola Pol. de Sao Paulo. *TT 2: SP 2.* Oct. 1925 to date with Caixas Beneficentes dos Funcionarios Publicos e da Forca Publica, fiscalization of constructions to public employers. *TT 0.5: P 0.5. TT 2.5: SP 2: P 0.5.* Refers to T. A. Ramos, V. da Silva Freire, R. C. Simonsen, F. T. da S. Telles.

790

(8) **FRENCH, CARL R.**, Box 561, Kankakee, Ill. (Age 38. Born Salem, Ohio.) 4 years student, Coll. of C. E., Ohio State Univ. *TT 1.3: SP 1.3.* March to Sept. 1907, June to Sept. 1911 and May to Sept. 1913 Rodman, Levelman and Jun. Topographer, U. S. Geological Survey. *TT 1: SP 1.* June to Sept. 1910 Instrumentman, Ohio Fuel Oil Supply Co., Charleston, W. Va. June 1912 to May 1913 Instrumentman on surveys and Recorder on triangulation, City of Cincinnati. *TT 0.9: SP 0.9.* Feb. 1914 to July 1915 with County Engr.

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Ashland, Ohio, 3 months as Chf. of Party on road surveys, 4 months in charge of road plans, and 10 months on general county engineering and surveying. *TT 1.4: SP 1.4: D 0.3.* Aug. 1915 to Sept. 1917 with Illinois Div. of Highways, 1½ years as Res. Engr. on bridge and road construction, 7 months Draftsman and 3 months on surveys. *TT 2.1: SP 0.6: P 1.5: RC 1.5.* Sept. 1917 to July 1919 with U. S. Army, 3 months at Engineer Officers' Training Camp, 5 months with U. S. Geological Survey as Primary Levelman, 1 year on aerial photographic mapping, 2 months with engineer service battalion; 9 months with A. E. F. *TT 0.4: SP 0.4.* July 1919 to date with Illinois Div. of Highways, until Sept. 1919 as Res. Engr., being Field Engr. on road construction, from Sept. 1919 to April 1925 Dist. Maintenance Engr., Dist. No. 1, supervising and directing maintenance on state roads (600 miles in 1924), and (winters 1919-1921) in charge of office preparation of road plans; since April 1925 Supt. of Constr. in charge of road and bridge construction; at present on grading, paving and bridge work on 12-mile section. *TT 7.7: P 7.7: RC 7.7: D 1.* *TT 14.8: SP 5.6: P 9.2: RC 9.2: D 1.3.* Refers to B. D. Barker, R. R. Benedict, G. F. Burch, H. F. Clemmer, C. M. Hathaway, A. H. Hunter, F. T. Sheets, F. Tarrant.

791

(1) **FRENCH, RICHARD CHARLES**, 32-68 Forty-First St., Astoria, N. Y. (Age 21. Born Long Island City, N. Y.) 1927 B. S. in C. E., Cooper Union Inst. Tech. *TT 2: SP 2.* Refers to H. R. Codwise, F. E. Foss, G. Morrison, J. P. J. Williams.

792

(1) **FRIED, FREDERICK STANLEY**, Eng. Dept., Alabama Power Co., Birmingham, Ala. (Age 23. Born Detroit, Mich.) 1927 E. E., Cornell Univ. *TT 2: SP 2.* Refers to E. W. Schoder, F. J. Seery, F. G. Switzer, L. C. Urquhart.

793

(9) **GESSNER, CHARLES BOOTH**, 344 Batavia St., Toledo, Ohio. (Age 22. Born Toledo, Ohio.) 1927 C. E., Lehigh Univ. Summer 1923 Timekeeper, The Gessner Co., on construction of storm sewer at Perrysburg, Ohio. *TT 2: SP 2.* Refers to S. A. Becker, R. J. Fogg, M. O. Fuller, G. A. Gessner, Jr., F. T. Lawton, W. R. Okeson, H. G. Payrow.

794

(2) **GIFFORD, ALLAN THURSTON**, 21 Spruce St., Dedham, Mass. (Age 20. Born Fall River, Mass.) 1927 S. B., Mass. Inst. Tech. *TT 2: SP 2.* Refers to H. K. Barrows, C. M. Spofford.

795

(1) **GILBERT, FRANCIS PRINCE**, 407 Lake Ave., Lyndhurst, N. J. (Age 36. Born Athol, Mass.) 1914 B. S., Mass. Inst. Tech. *TT 2: SP 2.* June 1914-Oct. 1915 Asst. San. Engr., Maryland State Dept. of Health, inspections and reports on public water supplies, being Asst. on surveys and designs of water supply and sewage works for state institutions, and Acting Div. Engr., Eastern Div. *TT 1.4: P 1.4.* Nov. 1915 to Aug. 1918 Asst. Supt. of water supply and sewerage, Board of Water Commrs., Town of Freehold, N. J., on plans of water supply and sewerage systems, redesign and reconstruction of water pumping station, and design and construction of extensions. *TT 2.8: P 2.8: RC 2.8: D 2.8.* Aug. 1918 to April 1919 Second Lieut., San. Corps, U. S. Army, being Camp San Engr., Camp Grant, Rockford, Ill., responsible to Camp Surgeon for reports on sanitary engineering, quality of water, disposal of sewage and wastes, drainage, ventilation, etc. *TT 0.6: P 0.6: RC 0.6.* June and July 1919 Asst. Engr. with T. F. Bowe, Rutherford, N. J., on surveys and design of small sewerage systems, sidewalks, etc. *TT 0.2: P 0.2: RC 0.2: D 0.2.* Aug. 1919 Constr. Engr., American Concrete Steel Co., Lyndhurst, N. J., acting as Res. Engr. on construction of concrete, brick and steel factory. *TT 0.1: P 0.1: RC 0.1.* Sept. 1919-Nov. 1920 Asst. Engr. and Chf. Draftsman with Hill & Ferguson, Cons. Engrs., New York City, on inventory, and computation of appraisals and rates for large water-works properties, studies and designs of water supply projects, large cities. *TT 1.3: P 1.3: RC 1.3: D 0.8.* Dec. 1920-Dec. 1922 San Engr., International Health Board of Rockefeller Foundation, acting as Field Director of malaria control for Arkansas State Board of Health. *TT 2.1: P 2.1: RC 2.1: D 2.1.* Jan. to Oct. 1923 Asst. San. Engr., Arkansas State Board of Health, being Field Director of malaria control, directing engineering work, etc. *TT 0.8: P 0.8: RC 0.8: D 0.8.* Oct.-Dec. 1923 Field San. Engr. with Weston & Sampson, Cons. Engrs., Boston, Mass., on inspections and reports on dam and reservoir sites and water sheds in northern New Jersey as sources of additional water supply. *TT 0.2: P 0.2: RC 0.2.* Jan. 1924 to date Senior Asst. Engr., North Jersey Dist. Water Supply Comm., Newark, N. J., on preliminary designs and estimates for additional supplies, design of water-works structures, in charge of appraisal of water-supply properties (\$30 000 000), special studies. *TT 3.4: P 3.4: RC 3.4: D 1.5.* *TT 14.9: SP 2: P 12.9: RC 11.5: D 8.2.* Refers to L. G. Cutler, J. E. Garratt, S. Gordon, N. S. Hill, Jr., A. H. Pratt, A. L. Sherman, E. L. Walker, R. S. Weston.

796

(2) GLICKMAN, MAX, 476 Chestnut St., Springfield, Mass. (Age 27. Born Springfield, Mass.) 1925 B. S., Mass. Inst. Tech. TT 2: SP 2. Oct. 1926 to March 1927 Structural Draftsman, Boston & Maine R. R. TT 0.5: SP 0.5. TT 2.5: SP 2.5. Refers to H. K. Barrows, W. M. Fife, J. W. Howard, M. Linenthal, O. E. Parks, C. M. Spofford.

797

(10) GODWIN, ROBERT HUGH, Box 264, West Jackson, Miss. (Age 21. Born Hattiesburg, Miss.) 1927 B. E., Univ. of Miss. Summers 1925 and 1926 with M. L. Culley, C. E., Jackson, Miss., on general engineering. TT 2: SP 2. Refers to M. L. Culley, J. H. Dorroh.

798

(1) GOLLANDSKOFF, MICHAEL GABRIEL, 272 Boolvarny Ave., Harbin, China. (Age 27. Born Rostov, Russia.) 1927 B. S. in Civ. Eng., Univ. of Cal. TT 2: SP 2. Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, F. S. Foote, C. G. Hyde.

799

(12) GONGWER, VERNE, 415 Fifth St. N. E., Puyallup, Wash. (Age 41. Born Lansing, Mich.) 1908 B. S. in C. E., Mich. State Coll. TT 2: SP 2. While student and June 1908 to May 1909 Draftsman and Designer, Michigan State Highway Dept., Lansing, Mich., on maps, plans, records, design of bridges, culverts, etc. TT 0.9: SP 0.5: P 0.4: D 0.5. July to Oct. 1909 Rodman, Tacoma Eastern R. R. TT 0.2: SP 0.2. Oct. 1909 to Feb. 1910 Computer, City of Seattle, on earthwork, grading, paving, condemnations, etc. TT 0.3: SP 0.3. Feb. to May 1910 Asst. Engr., City Engr.'s office, Corvallis, Ore. TT 0.2: SP 0.2. May 1910 to March 1912 with Pacific R. R. & Navigation Co., Portland, Ore., as Instrumentman, part of time with responsibility of Res. Engr., on construction, grading, rockwork, tunnels, trestles, bridges, trackwork, estimates, etc. TT 1.9: SP 1.4: P 0.5: RC 0.5. March to Oct. 1912 Draftsman and Instrumentman with O. W. Backus and (after June 1912) Newell, Gossett & Walsh, Civ. Engrs., Clatskanie and Portland, Ore., on surveying and platting, land subdivisions, water-works surveys. TT 0.5: SP 0.5. Oct. 1912 to March 1913 Draftsman, Kittitas Reclamation Dist. (High Line Canal), Ellensburg, Wash., on maps, profiles, surveys, estimates, land classification. TT 0.4: SP 0.2: P 0.2. March 1913 to Dec. 1914 Locator, Inspector and Constr. Supt., with Frank C. Kelsey and City of Pendleton, Ore., located 17 miles of gravity water supply, inspected construction of covered reservoirs, and engineered and superintended extensions to distribution system. TT 1.7: SP 0.5: P 1.2: RC 1.2. Dec. 1914 to Sept. 1917 Designer and Engr. on construction, Bureau of Grade Separation, City of Portland, on Oregon-Washington R. R. & Navigation Co., grade separation, involving lowering of tracks 12 ft. for 2 miles in Sullivans Gulch, and construction of seven concrete viaducts, Union Ave. Viaduct, etc. TT 2.8: SP 0.8: P 2: RC 1: D 2. Sept. 1917 to Feb. 1918 Draftsman and Designer, with Commr. of Public Docks, Portland, on St. Johns Terminals and other docks, some construction work on pile driving and docks. TT 0.4: P 0.4: RC 0.2: D 0.2. Feb. 1918 to April 1920 Designer and Constr. Engr. with Baar & Cunningham, Engrs., Portland, in charge of design and drafting room on irrigation and drainage projects, hydraulic engineering, consulting, port development, grain elevators, etc., and of construction of drainage projects. TT 2.2: P 2.2: RC 2.2: D 2. April 1920 to Feb. 1923 Designer and Chf. Inspector, Port of Tacoma, Wash., on construction of lumber docks and transit shed. TT 2.8: P 2.8: RC 1.5: D 1.3. Feb. 1923 to date Structural Engr., Asst. Engr. and Hydr. Engr., Cushman Power Project, Tacoma, in charge of drafting room and plans of project, except electrical; complete charge design and construction of water crossings, transmission line towers, substation and outdoor switching station; design and plans of North End transmission pipe line, Reservoir, Pumping Station H, design and construction, Cushman Spillway, and at present in charge of preliminary surveys, investigations and estimates, Kopowsin industrial water-supply project. TT 4.2: P 4.2: RC 4.2: D 3.3. TT 20.7: SP 6.7: P 14: RC 10.9: D 9.3. Refers to H. F. Blood, J. W. Cunningham, P. H. Dater, F. F. Henshaw, W. A. Kunigk, G. L. Parker, S. H. Sims, O. E. Stanley, J. L. Stannard, B. E. Torpen.

800

(8) GONNERMAN, HARRISON FREDERICK, 33 West Grand Ave., Chicago, Ill. (Age 41. Born Dixon, Ill.) 1908 B. S., and 1913 M. S., Univ. of Ill. TT 2: SP 2. Oct. 1908 to Sept. 1917 at Univ. of Illinois as follows: Oct. 1908 to Sept. 1910 Asst., Eng. Experiment Station; Draftsman, assisted on tests and compilation of data of investigations in concrete, wood, clay products, steel, hydraulics; Sept. 1910 to Sept. 1914 Instructor, theoretical and applied mechanics; summers on tests of reinforced concrete, including structures; Sept. 1914 to Sept. 1917 First Asst., Sept. 1917 to Sept. 1918 Research Associate, and Sept. 1918 to Sept. 1920 Research Asst. Prof., Eng. Experiment Station, researches and reports on concrete, reinforced concrete and concrete materials; summer 1918 Testing Engr., Emergency Fleet Corporation. TT 11.9: SP 0.9: P 11: RC 6: D 1.5. Sept. 1920 to Aug. 1922 Mgr., Electrical Appliance

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Shop, Los Angeles, Cal. Sept. 1922 to March 1927 with Structural Materials Research Laboratory, Lewis Inst., Chicago, Ill., making investigations and reports on concrete and concrete materials. July 1926 to date also Research Laboratory, Portland Cement Association; since March 1927 Mgr. of Research Laboratory. *TT 4.7: P 4.7: RC 4.7: D 1.5. TT 18.6: SP 2.9: P 15.7: RC 10.7: D 3.* Refers to D. A. Abrams, M. L. Enger, W. K. Hatt, A. R. Lord, F. R. McMillan, A. F. Robinson, W. A. Slater, A. N. Talbot.

801

(10) **GOODWIN, BENJAMIN HARVEY**, Box 226, Elizabeth City, N. C. (Age 21. Born Elizabeth City, N. C.) 1927 B. S. in C. E., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, H. F. Janda.

802

(5) **GORRELL, SENATOR, WILSON, Jr.**, 1323 North Eden St., Baltimore, Md. (Age 24. Born Baltimore, Md.) 1927 B. E., Johns Hopkins Univ. *TT 2: SP 2.* Refers to T. F. Comber, Jr., J. H. Gregory, J. T. Thompson.

803

(4) **GREEN, CHARLES HENRY**, Phoenix Bridge Co., Phoenixville, Pa. (Age 21. Born Sumter, S. C.) 1927 B. S. in C. E., N. C. State Coll. Summer 1926 Concrete Inspector, William C. Olsen, Inc., Engrs., Raleigh, N. C. At present Draftsman, Phoenix Bridge Co., Phoenixville, Pa. *TT 2: SP 2.* Refers to C. L. Mann, H. Tucker.

804

(2) **GREENHALGE, ARNOLD MARTLAND**, 122 St. Stephen St., Boston, Mass. (Age 22. Born Fall River, Mass.) 1927 B. S., Mass Inst. Tech. *TT 2: SP 2.* Refers to C. B. Breed, C. M. Spofford.

805

(8) **GRIFFITH, LINCOLN EDWARD**, 4821 Lake Park Ave., Chicago, Ill. (Age 26. Born Knightsville, Ind.) 1925 B. S., Rose Pol. Inst. *TT 2: SP 2.* June to Nov 1925 Project Engr., Indiana State Highway Comm., on construction of 9-mile section of concrete pavement. *TT 0.5: SP 0.5.* Dec. 1925 to Jan. 1926 with MacDonald Eng. Co., Chicago, Ill., as Tracer and Detailer on cement plant plans, principally reinforced concrete. *TT 0.1: SP 0.1.* Feb. to March 1926 Chainman and Instrumentman with Harry I. Orwig, Land Surveyor, Chicago. *TT 0.2: SP 0.2.* March 1926 to Feb. 1927 Civ. Engr., Industrial Bldg. Constr. Co., instrument work and estimating on power-plant construction. *TT 1: SP 1.* March to May 1927 Draftsman, The Pure Oil Co., Chicago, tracing, detailing and designing filling stations, garages, warehouses, reinforced concrete platforms, etc. June 1927 to date Tracer and Detailer on water-works plans, Dept. of Public Works, Bureau of Eng., Chicago. *TT 0.3: SP 0.3. TT 4.1: SP 4.1.* Refers to R. L. McCormick, H. A. Thomas.

806

(10) **GROOMS, ROY SEWELL**, Box 82X, Auburn, Ala. (Age 26. Born New Hope, Ala.) 1927 B. S., Ala. Pol. Inst. Summer 1925 Rodman, Alabama State Highway Dept. *TT 2: SP 2.* Refers to C. A. Baughman, J. A. C. Callan.

807

(14) **GROVE, EMERY CHESTER**, Irving, Kans. (Age 22. Born Irving, Kans.) 1927 B. S., Kans. State Agri. Coll. Summer 1926 Asst. to Res. Engr., Marshall County, Kans., acting as Rodman, Chainman and Inspector on grading and bridge construction on Federal Aid projects. *TT 2: SP 2.* Refers to H. Allen, L. E. Conrad, F. F. Frazier, M. W. Furr, C. H. Scholer, L. V. White.

808

(4) **GRUBB, ALBERT LESLIE**, Care, Phoenix Bridge Co., Phoenixville, Pa. (Age 22. Born Washington, D. C.) 1927 B. S. C. E., W. Va. Univ. Summer 1923 Rodman, Morgan County (W. Va.) Road Comm. Summer 1924 with Penna. Pol. Co., on plant work. June 1927 to date Detailer, Phoenix Bridge Co. *TT 2: SP 2.* Refers to L. V. Carpenter, R. P. Davis.

809

(1) **GUILD, WILBUR GILLFILLAN**, 217 North Seventh St., Newark, N. J. (Age 28. Born Watseka, Ill.) 1920 B. S. in Mathematics, Illinois Wesleyan Univ. 1921 M. S. in Mathematics, and 1926 B. S. in Civ. Eng., Univ. of Ill. *TT 2: SP 2.* June to Sept. 1921 Rodman, Shanks & Gannon Constr. Co., Watseka, Ill. *TT 0.2: SP 0.2.* Sept. 1921 to June 1923 Instructor in Mathematics and Physics, surveying and general engineering drawing, Illinois Coll., Jacksonville, Ill. *TT 2: SP 2.* June to July 1924 Jun. Asst. Engr., New York Transit Comm., being Rodman and Transitman. *TT 0.1: SP 0.1.* July 1924 to Oct. 1925 Transitman and Instrumentman, Delaware, Lackawanna & Western R. R. *TT 1.3: SP 1.3.* June to Sept. 1926 Instrumentman, New York Central R. R., Dept. of Structures, drafting and

design. *TT 0.2: SP 0.2.* Sept. 1926 to date with Waddell & Hardesty, Cons. Engrs., New York City, checking and design. *TT 0.7: SP 0.2: P 0.5.* *TT 6.5: SP 6: P 0.5.* Refers to H. Cross, S. Hardesty, T. D. Mylrea, T. C. Shedd, J. A. L. Waddell, C. C. Williams:

810

(12) **GWINN, ERNEST SIDNEY**, 2369 Franklin Ave., Seattle, Wash. (Age 22. Born Seattle, Wash.) 1927 B. S. in C. E., Univ. of Wash. *TT 2: SP 2.* Oct. 1924 to April 1925 Time-keeper on American Can Co. warehouse, and June to Nov. 1926 as Journeyman Carpenter ran levels and built concrete forms, all for A. W. Quist Co., Gen. Contrs., Seattle, Wash. May to Sept. 1925 in charge of building a residence (1½ stories); private work. *TT 0.8: SP 0.8.* *TT 2.8: SP 2.8.* Refers to W. F. Allison, I. L. Collier, J. B. Hamilton, C. W. Harris, C. C. More.

811

(1) **HAGERTY, JOHN JAMES**, 70 East 45th St., New York City. (Age 51. Born Troy, N. Y.) 1898 to 1904 and 1906 to 1907 Gen. Supt. for John C. Rodgers, Gen. Contr. *TT 6: P 6: RC 6.* 1904 to 1906 Vice-Pres. and Gen. Mgr., Rodgers Contr. Co. *TT 2: P 2: RC 2.* 1907 to date Pres., Rodgers & Hagerty, Inc.; contracts included sewers, water mains, Interborough and Rapid Transit work, Manhattan Bridge masonry, excavating, grading, Bay Ridge bulkhead wall, Court House Foundation, New York City, Hill to Hill Bridge, Bethlehem, Pa., tunnel approaches to Holland Tunnel, etc. (\$63 000 to \$7 321 000, list given in application). *TT 20: P 20: RC 20.* *TT 28: P 28: RC 28.* Refers to W. N. Beach, E. A. Byrne, J. H. Myers, G. H. Pegram, R. Ridgway, G. T. Seabury, R. A. Shailer, J. R. Slattery, J. W. Smith, H. C. Turner.

812

(2) **HALL, GEORGE ALBRO**, 32 Powder House Boulevard, Somerville, Mass. (Age 21. Born Waterville, Conn.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to J. B. Babcock, 3d., C. B. Breed, W. M. Fife, C. M. Spofford, R. G. Tyler.

813

(5) **HALL, GEORGE LAIRD**, 8 East Read St., Baltimore, Md. (Age 39. Born Boston, Mass.) 1911 B. S. in Civ. Eng., Tufts Coll. *TT 2: SP 2.* Jan. to April 1923 took course in epidemiology at Johns Hopkins School of Hygiene and Public Health. Summers 1909 and 1910 and July 1911 to Feb. 1912 Eng. Asst., Eng. Dept., Massachusetts State Board of Health, surveying, drafting, inspecting sewage-treatment and industrial plants, etc. *TT 0.5: SP 0.5.* Feb. 1912 to Oct. 1913 Asst. Chf. San. Inspector, Health Dept., Cincinnati, Ohio, supervised work of inspectors, made investigations and reports of sanitary surveys of summer camps, industrial plants and public buildings. *TT 1.3: SP 1.3.* Oct. 1913 to Oct. 1914 Observer in cotton manufacturing plant, S. Slater & Sons, Webster, Mass. Dec. 1914 to date with Bureau of San. Eng., Maryland State Dept. of Health, until April 1915 as Special Asst. Engr. in charge of field surveys and plans for water and sewerage systems at Maryland House of Correction; since April 1915 Div. Engr., supervising and directing work in drafting room, examining plans and specifications for water and sewerage systems, water-purification and sewage-treatment plants, preparing preliminary plans and cost estimates for proposed water and sewerage systems for municipalities; in responsible charge of plans and specifications for water and sewerage systems for a university, sanatoriums, hospitals, school, etc. (approx. \$200 000); since July 1922 in responsible charge of construction of water and sewerage works at state institutions; investigations and reports concerning water supply, water purification, sewerage and sewage treatment; from Sept. 1925 to March 1926 Acting Chf. Engr. of the Bureau. *TT 12.6: SP 0.3: P 12.3: RC 10: D 5.* *TT 16.4: SP 4.1: P 12.3: RC 10: D 5.* Refers to G. L. Bean, A. E. Christliff, F. H. Dryden, J. B. Ferguson, J. H. Gregory, R. B. Morse, A. Wolman.

814

(11) **HAMM, HERBERT ALBERT**, 607 Ferguson Bldg., Los Angeles, Cal. (Age 39. Born Jackson, Me.) Dec. 1917 to Jan. 1919 Dist. Engr., Air Service, U. S. Army, in charge of engineering inspection and production of wood parts for airplanes, San Francisco Dist. (included entire Pacific Coast territory). *TT 1.1: SP 1.1: RC 1.1.* 1913 to Dec. 1917 and Jan. 1919 to date in private practice on design, supervision and at times Engr. on construction of building of frame, frame and tile, reinforced concrete and steel, steel frame, steel frame and brick, mill type, brick and frame, reinforced concrete, etc., including fruit-packing, fruit-storage, woodworking, manufacturing and cold-storage plants, ice, roofing and furniture factories, etc. (\$12 000 to \$300 000, total over \$1 200 000). *TT 13.2: P 13.2: RC 10.2: D 3.* *TT 14.3: SP 1.1: P 13.2: RC 11.3: D 3.* Refers to E. L. Bruner, K. C. Grant, J. C. Hahn, R. P. Miller, W. Putnam.

815

(1) **HAMMOND, CHARLES LESTER**, 127 Underwood St., Newark, N. J. (Age 23. Born Newark, N. J.) 1927 B. S., Cooper Union Inst. Tech. Summers 1925 and 1926 Paying

Inspector, City of Newark, N. J., supervising construction of asphalt and reinforced concrete pavements. *TT 2: SP 2.* Refers to H. R. Codwise, F. E. Foss, G. Morrison, J. P. J. Williams.

816

(10) **HARDY, ROBERT LELAND**, 306 North Wall St., Calhoun, Ga. (Age 21. Born Calhoun, Ga.) 1927 B. S. in C. E., Ga. School Tech. Summer 1923 Chainman, and summers 1924 and 1925 instrument and office work on highways, with J. D. Keever. Summer 1926 Chainman, Pine Hills Constr. Co., on subdivision. *TT 2: SP 2.* Refers to R. P. Black, B. T. Quarles, F. C. Snow.

817

(10) **HARRIS, ROBERT OLIN**, 956 Waverly Way N. E., Atlanta, Ga. (Age 21. Born Atlanta, Ga.) 1927 B. S. in C. E., Ga. School Tech. Summer 1925 Inspector, Raymond Concrete Pile Co., Miami, Fla. *TT 2: SP 2.* Refers to R. P. Black, F. C. Snow.

818

(10) **HARTE, JOHN JOSEPH**, Box 111, Ninety Six, S. C. (Age 24. Born New York City.) 1921 Instrumentman, John Lowery & Co., New York City. *TT 0.2: SP 0.2.* 1921 to 1926 with North Eastern Constr. Co., until 1925, construction costs, estimates, etc., New York City, then Engr., at Winston Salem, N. C., on instrument work, reports, etc., for new City Hall. *TT 4.8: SP 4.8.* 1926 to date with Tucker & Laxton, Inc., Charlotte, N. C., 1 year as Engr. on large water main job in Knoxville, Tenn., then Supt. on sewer and water system in Ninety Six, S. C. 1926 to 1927 (spare time) on surveys and architectural and engineering design for garage building for Hot Blast Coal Co., Knoxville. *TT 1.1: P 1.1: RC 0.1: D 0.5.* *TT 6.1: SP 5: P 1.1: RC 0.1: D 0.5.* Refers to R. W. Bailey, Jr., H. W. Ferris, A. Mazeau, E. C. O'Brien, F. X. Scanlan, E. L. Scruggs.

819

(15) **HASIE, COLEMAN LLOYD**, Box 966, Memphis, Tex. (Age 31. Born Nebraska City, Nebr.) 1915 to 1917 student, Agricultural and Mechanical Coll. of Texas. *TT 0.7: SP 0.7.* June to Sept. 1916 and Sept. 1917 to Oct. 1918 Asst. County Engr., Karnes County (1916) and Potter and Oldham Counties, Tex., on highway construction. *TT 1.1: P 1.1: RC 1.1.* Oct. 1918 to Oct. 1919 Asst. County Engr., Wheeler County, and Res. Engr. in responsible charge of road construction and plans. *TT 1: P 1: RC 1.* Oct. 1919 to Jan. 1921 Dist. Engr. with Hess & Skinner, in charge of plans and construction on 150 miles of roads, Amarillo, Tex.; Engr., Representative of Rotary Club on construction (approx. \$600 000). *TT 1.2: P 1.2.* Jan. 1921 to Jan. 1922 County Engr., Fisher County, Tex., on road plans and construction (\$200 000). *TT 1: P 1: RC 1.* Jan. 1922 to June 1924 County Engr. of Lamb, Hickley and Bailey Counties, Tex., on road plans and construction (approx. \$300 000) about 200 miles state and county highways. *TT 2.5: P 2.5: RC 2.5.* June 1924 to date on plans and construction for Hall County, State and Federal Aid (approx. \$1 000 000, not completed); also City Engr., Wellington, Tex., on sewer system and water extension (\$86 000) and paving program (\$300 000); City Engr., Memphis, Tex., on sewer extensions, etc.; sanitary sewer, McLean, Tex. (under construction), water system, White Deere, Tex. (\$60 000, under construction); wood piling bridge and combination steel and concrete bridge (approx. \$80 000) Donley County; also Capt., 462d Engrs., U. S. Army. *TT 2.8: P 2.8: RC 2.8.* *TT 10.3: SP 0.6: P 9.7: RC 8.5.* Refers to L. B. Bone, R. V. Glenn, G. W. McClelland, R. Pace, J. E. Pirie, H. C. Porter, J. Rady, C. E. Zigenbein.

820

(10) **HATMAKER, DANIEL GEORGE**, 109 North West Sixth Ave., Miami, Fla. (Age 46. Born Cincinnati, Ohio.) 1905-1906 student in Civ. Eng., Univ. of Cincinnati. *TT 0.7: SP 0.7.* 1900 to 1901 Chainman, Baltimore & Ohio R. R. *TT 1: SP 1.* 1901 to 1902 Timekeeper and Material Checker, Kirchner Constr. Co., Cincinnati, Ohio. *TT 1: SP 1.* 1902 to 1907 (except 1905-1906 at Univ.) Instrumentman, New Water Works Comm., Cincinnati, tunnel and pumping station construction and distribution system betterments. *TT 4: SP 4.* 1907 to 1908 Instrumentman, Isthmian Canal Comm., Mun. Eng. Div., Canal Zone, Panama. *TT 1: SP 1.* 1908 to May 1917 and 1919 to 1920 Constr. Engr., Cincinnati Water Works, distribution system betterments, storage tank and reservoir construction. *TT 10: SP 4: P 6: RC 3.5: D 2.5.* May 1917 to Aug. 1919 Capt., Co. D., U. S. Engr. Corps, 504th Engr. Battalion, supply depot construction, Is-sur-Tille, France. *TT 2: P 2: RC 2.* 1920 to 1923 Deputy County Engr., Hamilton County, Ohio, on concrete road construction. *TT 3: P 3: RC 2: D 1.* 1923 to 1925 Sales Engr., Ohio Refining Co., Cincinnati. *TT 2: SP 2.* 1925 to date, Res. Engr., S. A. Lynch Enterprises, Miami, Fla., dredging, concrete bulkhead and bridge construction. *TT 2: P 2: RC 2.* *TT 26.7: SP 13.7: P 13: RC 9.5: D 3.5.* Refers to H. R. Gabriel, H. W. Hanly, J. A. Hiller, R. M. Miller, J. F. Reynolds, W. E. Reynolds, C. Wuest, Jr.

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(10) **HAYES, ROBERT DUDLEY**, 416 Glenn Bldg., Atlanta, Ga. (Age 22. Born Marion, S. C.) 1926 B. S. in C. E., Ga. School Tech. *TT 2: SP 2.* July to Aug. 1926 Draftsman on reinforced concrete and steel design with F. A. Hubbell, Atlanta, Ga. *TT 0.1: SP 0.1.* Aug. to Sept. 1926 Instrumentman, A. K. Adams Constr. Co., Atlanta. *TT 0.1: SP 0.1.* Sept. 1926 to date Field Engr., Georgia Power Co., Roadway Dept., surveys, designs and details, construction of street car plants and general drafting. *TT 0.7: SP 0.7.* *TT 2.9: SP 2.9.* Refers to R. P. Black, B. M. Hall, Jr., W. A. Hansell, C. A. Smith, F. C. Snow, S. R. Young.

822

(4) **HAZARD, HENRY NEW**, 21 West Church St., Bethlehem, Pa. (Age 25. Born Des Moines, Iowa.) 1924 C. E., Rens. Pol. Inst. *TT 2: SP 2.* Summer 1921 Asst. Engr. on construction of mill building for Spaulding Fiber Co. at Tonawanda, N. Y., and summer 1922 Res. Engr. on erection of steelwork for Ford Plant at Green Island, N. Y. (3 months), and Asst. Engr., setting foundations for Genesee Bldg. and Buffalo Athletic Club (2 weeks), all for Lackawanna Bridge Works. Summer 1923 Asst. Engr., Bethlehem Steel Co. on erection of steel spans of Hill to Hill Bridge at Bethlehem, and erection of three single-track girder spans for Lehigh & New England R. R., near Bethlehem. July 1924 to Aug. 1925 with Worden-Allen Co., Milwaukee, Wis., until Oct. 1924 as Draftsman, then Res. Engr. on erection of sub-power station at Lyons, Ill., cast house and skip incline for Youngstown Sheet & Tube Co. and high line for blast furnace at Inland Steel Plant, Indiana Harbor, Ind. *TT 1: SP 0.2: P 0.8.* Aug. 1925 to date Res. Engr., Bethlehem Steel Co., successively on erection of three through girder spans for Lehigh-Hudson River R. R. at Warwick, N. Y., car shops for Rapid Transit Comm. of New York City at Coney Island, Buffalo-Fort Erie Bridge over Niagara River at Buffalo, additions to Company's Sparrow Point (Md.) Plant, and (since March 1927) Elizabeth-Howland Hook Bridge for Port Authority of New York and New Jersey at Elizabeth, N. J. *TT 2: P 2: RC 2. TT 5: SP 2.2: P 2.8: RC 2.* Refers to E. L. Clarke, T. Earle, W. A. Hazard, T. R. Lawson, C. H. Mercer.

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(1) **HENNESSY, DANIEL JOSEPH**, 17, Gramercy Park, New York City. (Age 30. Born Brookline, Mass.) 1920 B. S., Mass. Inst. Tech. *TT 2: SP 2.* June 1920 to June 1921 Sales Engr., National Pressed Steel Co., Massillon, Ohio, selling and designing light steel joist floor construction. *TT 1: SP 0.5: P 0.5: D 0.5.* June 1921 to date member of firm, Hennessy & Green, Engrs., and Bldg. Contrs., until 1924 at Boston, Mass., and since then at Miami, Fla. *TT 6: SP 3: P 3: RC 3. TT 9: SP 5.5: P 3.5: RC 3: D 0.5.* Refers to J. B. Babcock, 3d, R. A. Doane, J. F. Downey, Jr., C. M. Spofford, H. A. Varney.

824

(10) **HICKLIN, ROBERT GUTHRIE**, 706 Bona Allen Bldg., Atlanta, Ga. (Age 29. Born Guthriesville, S. C.) Jan. 1916 to Jan. 1918 with U. S. War Dept., Montgomery, Ala., as Recorder, Computer, Draftsman, and Instrumentman in charge of party on a river survey (150 miles). *TT 2: SP 2.* Jan. to Oct. 1918 Instrumentman, Aluminum Co. of America, Maryville, Tenn., in charge of party on surveys, profiles, etc. *TT 0.7: SP 0.7.* Oct. 1918 to March 1919 and Oct. 1919 to Aug. 1920 with Lockwood-Greene & Co., Atlanta, Ga., as Instrumentman-Inspector on location and construction of streets, highways and railroad trestle at Ft. Benning, Ga., and (after Oct. 1919) Asst. Res. Engr. on field layout work and inspection of reinforced concrete mill building, boiler and filter plants, village (100 houses) with streets, sewers, water, lights, etc. (approx. \$1 000 000). *TT 1.2: SP 1: P 0.2.* March to Sept. 1919 Chf. of Party, Constr. Div., U. S. Army, at Camp Jackson, S. C., on surveys and setting boundary monuments on 25 000 acres for government reservation. *TT 0.5: SP 0.5.* Aug. 1920 to date with Robert & Co., Inc., Atlanta, Ga., as follows: Aug. 1920 to April 1921 Res. Engr. in charge of completing construction of 5-story mill building, weave shed, boiler plant, remodeling mill buildings, village (150 houses) with streets, sewers, water, lighting, etc., and installed machinery (approx. \$3 000 000); April to Dec. 1921 and May to Oct. 1922 Engr., Civ. Dept., survey work, drafting, designing and estimating on plant layouts, water and sewer systems, highways and hydro-electric developments; Dec. 1921 to May 1922 Res. Engr. in charge of design and construction of sewer and water system for City of Lanett, Ala.; Oct. 1922 to June 1923 Asst. Res. Engr. on construction of steel and reinforced concrete viaduct and 7-story reinforced concrete building (approx. \$750,000); June 1923 to June 1924 Res. Engr. on construction of two filter plants (1 000 000 gal. daily) large school, two mill buildings, etc. (approx. \$500,000); June 1924 to Feb. 1925 Res. Engr. on construction of filter plant and sewer and water system for City of Westminster, S. C. (approx. \$200,000); since Feb. 1925 Managing Engr., in charge of design and construction of all work of Municipal Dept., including filter and disposal plants, water and sewerage systems, paving, etc. (approx.

\$2 000 000); reports, appraisals, estimates and preliminary plans. *TT 6.9: P 6.9: RC 5.5: D 2.5. TT 11.3: SP 4.2: P 7.1: RC 5.5: D 2.5.* Refers to G. M. Bassel, H. A. Betaque, W. G. Miller, W. E. Reynolds, W. A. Richards, L. W. Robert, Jr., F. W. Sampson, S. R. Young.

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(4) **HICKS, JOSEPH NELSON**, 150 West Hanover St., Trenton, N. J. (Age 26. Born Trenton, N. J.) 1927 B. S. in C. E., Drexel Inst. *TT 2: SP 2.* Refers to H. L. Bowman, R. Sickles, L. C. Urquhart.

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(6) **HILL, HAROLD OTTO**, 111 Ninth St., Aspinwall, Pittsburgh, Pa. (Age 39. Born Stouffville, Ont., Canada.) Registered Engr., State of Pennsylvania. 1908 B. A. Sc., Univ. of Toronto. *TT 2: SP 2.* May 1908–Nov. 1912 with Riter Conley Co., Pittsburgh, Pa., on design, details and erection of gas holders, etc. as Draftsman, Checker, Steel Erection Inspector and Asst. Supt. of construction of plate and structural work, and (after Aug. 1911) Supt. in charge of construction. *TT 4.6: SP 3.3: P 1.3: RC 1.3: D 0.2.* Dec. 1912–Aug. 1914 Designer and Estimator, Blaw-Knox Co., Pittsburgh, on structural steel buildings and transmission towers. *TT 1.7: SP 1.7: D 0.7.* Sept. 1914–Aug. 1915 Engr., Pennsylvania R. R. Co., Conemaugh Div., Pittsburgh, Pa., surveying. *TT 1: SP 1.* Dec. 1917–May 1919 with Signal Corps, Eng. Dept., U. S. Army, Tours, France, on telephone and telegraph equipment. *TT 1.5: SP 1.5: D 0.5.* Sept. 1915–Nov. 1917 and June 1919 to date with Riter Conley Co., until Nov. 1917 as Designer and Estimator, structural steel and plate work, mill buildings, penstocks, coal bins, transmission towers, etc.; since June 1919 Transmission Engr., in charge of designing steel towers and substations for high-tension electric distribution. *TT 10.1: SP 2.2: P 7.9: RC 7.9: D 10.1. TT 18.9: SP 9.7: P 9.2: RC 9.2: D 11.5.* Refers to O. H. Bundy, J. W. Davis, R. W. Knight, R. MacMinn, J. A. Nelson, J. B. Smiley, G. L. Taylor.

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(1) **HILL, HUGH PALMER, Jr.**, 330 West Thirty-Fourth St., New York City. (Age 30. Born Washington, D. C.) 1924 B. S. in C. E., and 1926 M. S. E., George Washington Univ. *TT 2: SP 2.* June to Sept. 1915 Timekeeper, Boyle-Robertson Constr. Co., Washington, D. C. *TT 0.2: SP 0.2.* Oct. 1916 to April 1917 Draftsman, Engr. Dept., Sewer Div., District of Columbia, preparing plans and computing. *TT 0.5: SP 0.5.* April 1917 to Aug. 1918 and Sept. 1919 to April 1922 with Bureau of Constr. and Repair, Navy Dept., Washington, D. C., first as Ship Draftsman on computing and structural drafting, and after Sept. 1919 Asst. to Supervisor for Destroyers, Scout Cruisers, etc., at times being Head of section on trials of vessels, compiling data, making drawings, checking contractor's plans, some investigational and technical work. *TT 4: SP 3: P 1: RC 0.5: D 0.5.* April 1922 to May 1926 Asst. Structural Engr., Mun. Archt.'s Office, Engr. Dept., Washington, D. C., preparing structural plans, designing and making computations for reinforced concrete and steel structure, in charge of various surveys. *TT 4.1: SP 2.1: P 2: D 1.* May 1926 to May 1927 Inspector of Constr., J. C. Penney Co., New York City, in charge of alterations and construction of buildings, investigating new locations, preparing estimates, directing preparation of plans. *TT 1: P 1: RC 0.6: D 0.4. TT 11.8: SP 7.8: P 4: RC 1.1: D 1.9.* Refers to O. B. French, J. R. Lapham, H. Miller, L. D. Norsworthy, W. M. Wallace.

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(4) **HOKE, JOHN BOYD**, 142 Harrison Ave., Glenside, Pa. (Age 28. Born Martinsburg, W. Va.) Registered Prof. Engr., State of West Virginia. 1921 B. S. in C. E., Washington and Lee Univ. *TT 2: SP 2.* Jan. to Oct. 1919 with County Surveyor, Martinsburg, W. Va., as Instrumentman and Draftsman on highway location and design. *TT 0.7: SP 0.7.* June to Nov. 1921 with City Engr. of Martinsburg, as Inspector on construction of sewers, sewage-disposal plant and street pavements. *TT 0.4: SP 0.4.* Nov. 1921 to April 1927, with West Virginia State Road Comm., Div. No. 5, as Computer, Designer, Jun. Engr. in charge of design, Asst. Engr. in charge of design, layout and estimates; work included establishing grade lines, balancing earthwork, making paper locations, design of small drainage structures, estimates, etc., on approx. 300 miles of state highways. *TT 5.5: SP 2.5: P 3: RC 3: D 3.* April 1927 to date Engr. with Albright & Mebus, Cons. Engrs., on supervision and inspection of sewer construction. *TT 0.1: SP 0.1. TT 8.7: SP 5.7: P 3: RC 3: D 3.* Refers to J. P. Blundon, C. P. Fortney, F. L. Hawkins, C. F. Mebus, F. Von Roy, Jr.

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(7) **HOLDEFER, JOSEPH LUTZ**, Donnellson, Iowa. (Age 23. Born Crawfordsville, Ind.) 1927 B. S. in C. E., Iowa State Coll. *TT 2: SP 2.* Refers to R. A. Caughey, J. S. Dodds, W. L. Foster, A. H. Fuller, J. H. Griffith.

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(1) **HOLE, ROGER MERRITT**, 601 West 168th St., New York City. (Age 29. Born Knights-town, Ind.) Student in Civ. Eng., Univ. of Minnesota (Sept. 1915 to Feb. 1918) and Purdue Univ. (Sept. 1919 to Feb. 1920). *TT 1: SP 1.* June–Oct. 1920 Special Agt., U. S. Bureau

of Census, compiling drainage statistics. *TT 0.4: SP 0.4.* Dec. 1920 to March 1921 Draftsman, Sewer Dept., Minneapolis, Minn. *TT 0.3: SP 0.3.* March-Dec. 1921 and March-May 1922 Transitman and Chf. of Party, Minnesota State Highway Dept., on surveys. *TT 1: SP 1.* June to Sept. 1922 Locating Engr. on 110 000-volt transmission line, Minnesota Utilities Co., Eveleth, Minn. *TT 0.3: P 0.3: RC 0.3.* Oct.-Dec. 1922 Inspector (Res. Representative) on asphalt paving in Kalamazoo for Cons. Engrs., Chicago Paving Laboratory, responsible control of mix and temperature. *TT 0.3: P 0.3.* Jan.-Aug. 1923 Asst. Engr., Plant No. 1, Inland Steel Co., Indiana Harbor, in charge of surveys and details of design for plant trackage and switching-yard; also remodeling mill buildings, machine foundations, layout of building extensions, etc. *TT 0.7: P 0.7: RC 0.7.* Nov.-Dec. 1923 Jun. Asst., Instrumentman, New York Board of Transportation, base line and bench levels on subway construction. *TT 0.1: SP 0.1.* Dec. 1923 to Nov. 1924 Asst. Engr., Central Romana, Inc., La Romana, San Domingo, being Chf. of Party on surveys, railroad location and construction, bridge construction, supervising land surveys, sub-residency railroad construction, responsible for estimates, etc.; some concrete and rubble structures. *TT 0.9: P 0.9: RC 0.5.* March to July 1925 Asst. City Engr., Kewanee, Ill. in charge of party on surveys, and on estimates of cost, large paving program. *TT 0.4: P 0.4.* July to Sept. 1925 Instrumentman in charge of party on railroad and drainage reclamation surveys, San Blas Development Corporation, Republic of Panama. *TT 0.2: P 0.2.* Oct. 1925 to Feb. 1926 Constr. Engr. in charge for Tropical Oil Co., Colombia, on tank foundations, fire walls, river-bank revetments, drainage works at fueling stations along Magdalena River. *TT 0.4: P 0.4: RC 0.4.* March to Nov. 1926 Asst. to Res. Engr., Ferrocarril de Antioquia, Colombia, on heavy construction, including tunnel and viaduct work. *TT 0.7: P 0.7.* Nov. 1926 to March 1927 Asst. Sec. Engr., Carretera Al Mar, Colombia (R. W. Hebard & Co., Contrs.) in charge of party running preliminary location survey, highway through rough mountain country. *TT 0.3: P 0.3: RC 0.1.* *TT 7: SP 2.8: P 4.2: RC 2.* Refers to F. Bass, J. H. Caton, 3d, A. S. Cutler, G. L. Govin, F. T. Hillman, P. F. Huntington, A. L. Nelson, E. W. Wilson.

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(8) **HOLT, MARSHALL**, Greenup, Ill. (Age 21. Born Greenup, Ill.) 1927 B. S. in Civ. Engr., Univ. of Ill. Summer 1926 Rodman, Pennsylvania R. R. *TT 2: SP 2.* Refers to E. E. Bauer, H. Cross, J. J. Doland, W. C. Huntington, T. D. Mylrea, G. W. Pickels, W. M. Wilson.

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(2) **HOOVEL, WILLIAM HENRY**, 136 West Main St., Waterbury, Conn. (Age 26. Born Walla Walla, Wash.) 1923 B. S., Whitman Coll. 1926 C. E., Columbia Univ. *TT 2: SP 2.* June to Aug. 1926 Instructor, Columbia Univ. Summer School of Surveying. Aug. 1926 to date Engr., City of Waterbury, preliminary studies, layout and design on trunk sewer system. *TT 0.8: P 0.8.* *TT 2.8: SP 2: P 0.8.* Refers to A. H. Beyer, R. A. Cairns, J. K. Finch.

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(9) **HOOVER, CLARENCE BOAL**, 252 Seventeenth Ave., Columbus, Ohio. (Age 46. Born Ross, Ohio.) 1903 B. Sc. Agri., Ohio State Univ. *TT 2: SP 2.* Aug. 1904 to Oct. 1908 with Eng. Dept., Columbus, Ohio, until Sept. 1905 as Asst. Bacteriologist at sewage testing station, then Engr. Inspector of construction materials for Scioto River storage dam, water-purifying and softening works and sewage disposal works. *TT 4.2: SP 4.2.* Oct. 1908 to Aug. 1918 and April 1919 to May 1920 Chemist in charge of operation of sewage-treatment works and pumping stations, Columbus; also (until Aug. 1918) in charge of engineering on remodeling of septic tanks to Imhoff tanks (50 000 000 gal. daily), changing two sewage-pumping stations from steam and gas to electrical operation, additions to sewage-treatment works and pumping stations. *TT 10.9: P 10.9: RC 10.9: D 2.5.* Aug. 1918 to April 1919 Capt., Constr. Div., Q. M. C., U. S. Army, until Nov. 1918 in charge of sewage disposal investigations at Camp Custer, Battle Creek, Mich., then Officer in charge of utilities at Army Supply Base, Norfolk, Va. *TT 0.7: P 0.7: RC 0.7.* May 1920 to Oct. 1925 Engr. in Chg., Bureau of Water Works Extension, Columbus, enlargement of water purification works from 30 000 000 to 54 000 000 gal. daily; O'Shaughnessy Dam (65 ft. high, 1 100 ft. long) and Reservoir and miscellaneous water-works construction (total \$3 500 000). Dec. 1921 to date Supt. of Water and Sewage-Disposal Divs., Columbus. *TT 7: P 7: RC 7: D 1.* *TT 24.8: SP 6.2: P 18.6: RC 18.6: D 3.5.* Refers to E. G. Bradbury, C. B. Burdick, C. B. Cornell, H. P. Eddy, F. H. Eno, G. W. Fuller, J. H. Gregory, L. R. Howson, F. W. Jennings, G. A. Johnson, C. T. Morris, J. C. Prior.

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(3) **HORANDT, HENRY**, 119 Lincoln Ave., Syracuse, N. Y. (Age 23. Born Paterson, N. J.) 1927 C. E., Rens. Pol. Inst. *TT 2: SP 2.* Refers to E. R. Cary, L. W. Clark, A. W. Cuddeback, T. R. Lawson.

835

- (2) **HORTON, DONALD FRANCIS**, 40 Mechanic St., Haverhill, Mass. (Age 20. Born Haverhill, Mass.) 1927 S. B., Mass. Inst. Tech. *TT 2: SP 2.* Refers to J. B. Babcock, 3d, C. M. Spofford, R. G. Tyler.

836

- (6) **HOUSER, HAROLD SAXE**, 31½ Dilworth St., Pittsburgh, Pa. Graduating student awarded Iowa Section Prize. (Age 21. Born Iowa City, Iowa.) 1927 B. S. in C. E., Univ. of Iowa. *TT 2: SP 2.* Summer 1923 Tracer on switchboard wiring diagrams, Western Elec. Co., Chicago, Ill. Feb. 1924 to Feb. 1925 and summers 1925 and 1926 Estimator, Crane Co., Chicago, estimating power-plant piping, some piping layout and drafting. At present Draftsman, Pittsburgh-Des Moines Steel Co. *TT 1: SP 1. TT 3: SP 3.* Refers to R. B. Kittredge, B. J. Lambert, E. L. Waterman, S. M. Woodward.

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- (1) **HOWELL, WILLIAM STEVENS**, 79 Pierpont St., Rahway, N. J. (Age 33. Born Boonton, N. J.) Feb. to Sept. 1920 Supt., J. B. Blades Lumber Co., New Bern, N. C., land development, surveying, drainage ditches, house, barn, earth road and wooden bridge construction on 1700 acres. *TT 0.7: P 0.7: RC 0.7.* Feb. 1922 to Jan. 1925 Inspector and Supt., North Carolina State Highway Comm., acting as Rodman on borrow pits, cross-sections, grade stakes and levels, inspecting concrete and asphalt roads, supervising asphalt paving operations. *TT 3: SP 1.3: P 1.7: RC 1.7.* Jan. to July 1925 Asphalt Paving Supt., Eagle Eng. Co., on road construction. *TT 0.5: P 0.5: RC 0.5.* July to Sept. 1925 Supt., North Carolina State Highway Comm., on construction of 10 miles of shoulder work and subgrade work, Project 213. *TT 0.3: P 0.3: RC 0.3.* Sept. 1925 to date Asphalt Paving Expert, Foreign Sales Dept., The Barber Asphalt Co., instruction and supervision of manufacture of mixtures and construction of pavements. *TT 1.6: P 1.6: RC 1.6. TT 6.1: SP 1.3: P 4.8: RC 4.8.* Refers to C. N. Conner, C. N. Forrest, R. W. Parkhurst, R. E. Snowden, J. H. Weller.

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- (10) **HOWERTON, THOMAS McCLASKEY**, Asheville, N. C. (Age 41. Born Shelbyville, Ky.) 1908 B. C. E., Ky. State Univ. *TT 2: SP 2.* Summer 1906 Rodman and Leveler, L. & A. R. R. Summer 1907 Instrumentman, G. & K. Ry. Jan. to April 1909 Instrumentman on maintenance, Big Four Ry., Indianapolis, Ind. *TT 0.3: SP 0.3.* Sept. 1908 to Jan. 1909 Transitman and Draftsman and April 1909 to Aug. 1913 Chf. of Party with Union Development Co. of Chattanooga, Tenn., on surveys for water-power developments in Tennessee and North Carolina. Dec. 1911 to Aug. 1913 with Knoxville and Tallahassee Paper Cos., on extensive water-power investigations, in charge of several engineering parties. *TT 4.6: SP 0.3: P 4.3: RC 4.3.* March 1916 to June 1918 County Engr., Buncombe County, N. C., in charge of location and construction of roads and bridges. *TT 2.3: P 2.3: RC 2.3.* June to Nov. 1918 Chf. Engr. of Constr., U. S. Govt. Hospital No. 60, near Asheville, N. C. *TT 0.5: P 0.5: RC 0.5.* Nov. 1918 to date engineering, design and construction of concrete paving, bridges, retaining walls, water and sewer projects, etc., at present as Gen. Mgr., Howerton Eng. Co.; Company has engineering and supervision of Swannaoa San. Sewer Dist. (\$2 000 000), near Asheville, has designed Beaucatcher Tunnel (to cost \$400 000), and is preparing plans and specifications for Beaver Dam sewer and water project (to cost approx. \$300 000). *TT 8.5: P 8.5: RC 8.5. TT 18.2: SP 2.6: P 15.6: RC 15.6.* Refers to J. K. Grannis, E. L. Hageman, W. E. Rowe, B. E. W. Stout, G. C. White.

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- (3) **HUGHES, WILLIAM GERARD**, 1433 Elm St., Utica, N. Y. (Age 23. Born Utica, N. Y.) 1927 C. E., Rens. Pol. Inst. June 1927 to date Asst. Supt. on construction, John F. Hughes Constr. Co., Utica, N. Y. *TT 2: SP 2.* Refers to E. R. Cary, L. W. Clark, T. R. Lawson.

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- (7) **HUNTER, DON WILLIAM**, 1010 Donovan Bldg., Detroit, Mich. (Age 28. Born Detroit, Mich.) 1921 B. S. C. E., Univ. of Mich. *TT 2: SP 2.* June 1921 to Oct. 1925 Draftsman, successively with W. E. N. Hunter, Archt., Detroit, Mich., on steel, concrete and architectural work, with W. H. Gibson, Civ. Engr., Philadelphia, Pa., detailing concrete and steelwork, with McClellan & Junkersfeld on power-house work, co-ordinating architectural and structural work, and with Thompson-Starrett Co., on reinforced concrete design and detailing. *TT 4.3: SP 1: P 3.3: RC 1: D 0.4.* Oct. 1925 to date with W. E. N. Hunter, as Supt., Designer and on office work. *TT 1.5: P 1.5: RC 1.5: D 0.8. TT 7.8: SP 3: P 4.8: RC 2.5: D 1.2.* Refers to H. S. Braun, J. J. Dunkel, C. E. Hart, D. H. Plank, J. C. White.

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- (13) **HUSSEY, EDGAR WILLIAM**, 2502 Dana St., Berkeley, Cal. (Age 23. Born Atchison, Kans.) 1927 B. S., Univ. of Cal. *TT 2: SP 2.* Aug. 1922 to Aug. 1923 Rodman and Hydrographer's Asst., and summer 1925 Rodman, Merced (Cal.) Irrigation Dist. Summer

1926 Rodman on penstock location, Feather River Power Co., at Storrie, Cal. TT 1: SP 1. TT 3: SP 3. Refers to C. Derleth, Jr., B. A. Etcheverry, S. T. Harding, C. G. Hyde, D. R. McFarland.

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(1) **IGLSEDER, FRANCIS XAVIER**, Managua, Nicaragua. (Age 52. Born Constanca, Roumania.) 1896 Engr. Lieut., Austro Hungarian Tech. Mil. Acad. TT 2: SP 2. July 1896 to 1899 Lieut., 2d Regt. of Pioneers, Austro Hungarian Army. TT 2.3: P 2.3: D 0.5. 1899 to March 1901 with Brazilian Exploration Co., Ltd., London, as Locating Engr. and Engr. in charge of surveys, plans and estimates for proposed railroad in Brazil, investigation and reports on mining property, Minas Geraes. TT 2.3: P 2.3: RC 2.3: D 1. May to Sept. 1901 Asst. to Constr. Supt., Adams Constr. Co., Niagara Falls, N. Y., on Chittenden (Vt.) dam building, supervising technical details and directing construction. TT 0.4: P 0.4: RC 0.4. Jan. 1902 to March 1903 Chf. Draftsman with James McLaren, Contr., Brooklyn, N. Y., responsible for estimating and shop details for cut stone work, principally on school, Y. M. C. A. and hospital buildings. TT 1.2: SP 1.2. March 1903 to March 1904 and July 1904 to Aug. 1908 with E. J. Wulff, Cons. Engr., Tarrytown, N. Y., until March 1904 in charge of field and office work on surveys, then in responsible charge of surveys, designs, plans, specifications and supervising construction of macadam highways, pavements, sewers, docks, design of bridges and proposed grade crossing eliminations. TT 5.1: P 5.1: RC 4.1: D 2. March to July 1904 Field Supt., Prince & Kinkel Iron Works, supervising erection of structural steelwork on two buildings in New York. TT 0.4: P 0.4: RC 0.4. Aug. 1908 to Feb. 1911 with David S. Merritt, Tarrytown, in charge of surveys, designs, plans and specifications and supervising construction of roads, pavements, bridges and sewage-disposal plants; Village Engr. in responsible charge of all street and sewer construction and maintenance, street cleaning. TT 2.4: P 2.4: RC 2.4: D 2. March 1911 to Aug. 1912 Cons. Engr., La Clara Hydr. Gold Min. Co., Medellin, Colombia, in charge of designs and construction of new plant. TT 1.5: P 1.5: RC 1.5: D 1.5. Sept. 1912 to 1914 with American Museum of Natural History, New York, as Asst. to Chf. and Geographer in expedition to headwaters of the Orinoco. TT 1.1: P 1.1. Jan. to May 1914 with Naylor Bros. Machine Works, Peekskill, N. Y., in charge of factory reconstruction and installation of machinery in Vinegar Dept., Fleischman Co. TT 0.4: P 0.4: RC 0.4. June 1914 to June 1917 with Sambenigo Mines & Est. Co., Anori, Colombia, as Mgr. and designing and constructing hydro-electric plant. TT 3: P 3: RC 3: D 3. 1918 Jun. Engr., Public Service Comm., New York City, on final estimate of 7th Ave. Subway. TT 0.6: P 0.6. June 1918 to 1922 Chf. Engr., Tanamo (Cuba) Div., Atlantic Fruit Co., in responsible charge of surveys, railroads, docks, bridges, dwellings, roads, water-works, ice-plants, etc. TT 3.4: P 3.4: RC 3.4: D 3.4. 1924 to date with R. W. Hebard Co., Inc., New York City, until June 1925 on construction of carreteras nacionales de Panama, first as Sec. Engr. in charge of lines and grades then as Sec. Supt. in charge of construction of Penonome Sec.; since July 1925 on sanitation contract in Managua, Nicaragua, first as Chf. of Party on surveys, in charge of crusher erection, and at present Gen. Supt. on construction of asphalt pavement, storm and sanitary sewers, and water-supply system. TT 3.4: P 3.4: RC 1.9: D 0.2. TT 29.5: SP 4.2: P 25.3: RC 19.8: D 13.6. Refers to H. W. Durham, T. Guardia, R. W. Hebard, J. R. Losee, R. K. West, J. C. Wiest, E. W. Wilson.

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(15) **IVANCICH, PAUL NICHOLAS**, 710 Hawthorne, Houston, Tex. (Age 24. Born Ft. Worth, Tex.) 1927 B. S., Mass. Inst. Tech. Summer 1926 with Prof. C. B. Breed on drafting and field work for land development, at Lucerne, Maine. Obtained Reserve Officers' Training Corps Engr. Commission, U. S. Army. TT 2: SP 2. Refers to J. B. Babcock, 3d, C. B. Breed, C. M. Spofford.

844

(7) **JACKA, SAMUEL CUNO**, 608½ West Kalamazoo St., Lansing, Mich. (Age 31. Born Negaunee, Mich.) 1921 B. S., Univ. of Mich. TT 2: SP 2. June 1922 to June 1923 Constr. Engr. with Wesley Bintlz, Lansing, on design and construction of buildings, towers, walls, etc. TT 1: P 1: RC 0.6: D 0.4. June 1921 to June 1922 and June 1923 to date with O. E. Eckert, Lansing, Mich., as Inspector of sewers (3 months), Field Engr. on layout work, sewers and pavements (9 months). Constr. Engr. on pavement and sewer construction and design (3 years) and since June 1926 Office Engr. in charge of all office records. TT 5.1: SP 0.3: P 4.8: RC 3.6: D 1.3. TT 8.1: SP 2.3: P 5.8: RC 4.1: D 1.7. Refers to C. M. Cade, O. E. Eckert, F. A. Gould, C. T. Johnston, E. R. Weeber.

845

(2) **JACOBS, REGINALD FREDRICK**, 11 Clive St., Jamaica Plain, Boston, Mass. (Age 24. Born Boston, Mass.) 1927 B. S., Mass. Inst. Tech. Summer 1926 Transitman and Rodman, Massachusetts State Highway Dept. TT 2: SP 2. Refers to J. B. Babcock, 3d, C. B. Breed, W. M. Fife, C. M. Spofford.

846

(1) **JACOBSEN, ROBERT THORLEIF**, *Engineering News-Record*, New York City. (Age 31. Born Cambridge, Mass.) 1917 B. S. in M. E., N. Dak. Agri. Coll. TT 2: SP 2. March to June 1913 Draftsman with S. F. Crabbe, Archt., Fargo, N. Dak. Summer 1912 and 1917 to March 1927 (except 1918) in City Engr's. office, Fargo, as follows: Summer 1912 Draftsman; June to Dec. 1917 and Jan. to June 1919 Asst. Engr.; June 1919 to June 1920 Acting City Engr.; Jan. 1920 to March 1927 City Engr., Fargo, in charge of design and construction of sewers, water-works, paving, etc., also (after June 1919) acting as Supt. of Water Works in charge of construction, operation and maintenance of water-works. TT 8.9: P 8.9: RC 8.9: D 8.3. 1918 with U. S. Army, discharged as 2d Lieut., Field Artillery. TT 1: SP 1. March 1927 to date Asst. Editor, *Engineering News-Record*, New York City. TT 0.3: P 0.3. TT 12.2: SP 3: P 9.2: RC 8.9: D 8.3. Refers to F. L. Anders, T. R. Atkinson, W. G. Black, E. F. Chandler, S. A. Greeley, R. E. McDonnell, F. C. Wight.

847

(15) **JAUQUITH, ALFRED CHRISTIAN**, 2a San Juan de Letran No. 24, Mexico City, Mexico. (Age 60. Born Pilot Knob, Mo.) 2 years student, C. E. course, Missouri School of Mines. TT 0.7: SP 0.7. 1886 to 1891 Levelman and Transitman on railroad work. TT 5: SP 5. 1893 to 1895 City Engr., Merrill, Wis. TT 2: P 2: RC 2: D 2. 1895 to 1896 Locating Engr., Wisconsin & Michigan Ry., on preliminary surveys and final location in Wisconsin and Michigan. TT 1: P 1: RC 1: D 1. 1896 to 1905 member of firm, Countryman & Jaquith, Engrs., at Cripple Creek, Colo., part of time Chf. Engr. for San Luis Valley Land, Power & Irrigation Co., and for Cripple Creek Drainage Tunnel. TT 9: P 9: RC 9: D 9. Aug. 1914 to Sept. 1916 Constr. Supt., Denver Pueblo Constr. Co., building Colfax-Larimer Viaduct at Denver, Colo. TT 1: P 1: RC 1. Sept. 1917 to July 1926 Asst. Engr. and Engr., Designing Dept., U. S. Reclamation Service, office of Chf. Engr., at Denver. TT 9: P 9: D 9. July 1926 to date Asst. Chf. Engr., J. G. White Eng. Corporation, S. en C., on construction of irrigation works for Mexican Govt. TT 1: P 1: RC 1: D 1. TT 28.7: SP 5.7: P 23: RC 14: D 22. Refers to C. C. Cragin, W. L. Drager, C. C. Fisher, J. Hinds, C. H. Howell, J. S. Longwell.

848

(13) **JIMENEZ, JULIO**, 245 Market St., San Francisco, Cal. (Age 26. Born Panama, Panama.) 1923 Associate in Sci. in Civ. Eng., Pol. Coll. of Eng., Oakland, Cal. TT 2: SP 2. June to Aug. 1921 Tracer with Norman Coutler, Archt., San Francisco, Cal. Aug. 1923 to Jan. 1924 Rodman, California Highway Comm., Acting as Instrumentman, etc. Trinity and Shasta Counties. TT 0.5: SP 0.5. April 1924 to date Structural Draftsman, Dept. of Eng., Pacific Gas & Elec. Co., San Francisco, successively tracing, drawing, detailing, minor design and estimates under supervision, steel and reinforced concrete dams, power houses, transmission line structures, substations, etc. TT 3: SP 3. TT 5.5: SP 5.5. Refers to C. W. Appleford, F. B. Cook, Jr., T. J. Corwin, Jr., E. N. Murphy, N. F. Yde.

849

(15) **JOHNSON, OLIVER ARTHUR**, Care, U. S. Dist. Engr., Trust Bldg., Galveston, Tex. (Age 22. Born Wall Lake, Iowa.) 1927 B. S. in C. E., Iowa State Coll. TT 2: SP 2. Refers to T. R. Agg, W. L. Foster, A. H. Fuller, J. H. Griffith, H. N. Jenks, F. Kerekes.

850

(2) **JOHNSON, WALTER KENNETH**, 46 Melrose St., Lawrence, Mass. (Age 22. Born Lawrence, Mass.) 1927 B. S., Mass. Inst. Tech. TT 2: SP 2. Refers to H. K. Barrows, C. M. Spofford.

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(10) **JOHNSON, WILLIS CANTEY**, 507 West Second Ave., Gastonia, N. C. (Age 22. Born Birmingham, Ala.) 1926 B. S. in Civ. Eng., and 1927 M. S., Univ. of N. C. TT 2: SP 2. Refers to G. M. Braune, H. F. Janda.

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(13) **JONES, HERBERT EDWARD**, 543 Byron St., Palo Alto, Cal. (Age 23. Born Burlington, Iowa.) 1926 A. B. in Mathematics, and 1927 A. B. in Civ. Eng., Stanford Univ. TT 2: SP 2. Summer 1923, June to Dec. 1924 and April to Oct. 1925 with U. S. National Park Service, Glacier National Park, Mont., successively as Chainman, Inspector and (1925) Acting Res. Engr. on highway construction. TT 0.5: SP 0.5. TT 2.5: SP 2.5. Refers to R. F. Brown, C. Moser, L. B. Reynolds, E. C. Thomas, C. B. Wing.

853

(5) **JONES, JOSEPH WILLIAM**, 1509 North Wolfe St., Baltimore, Md. (Age 30. Born Baltimore, Md.) Oct. 1917 to date with Baltimore & Ohio R. R. as follows: Oct. 1917 to Nov. 1918 successively Chainman, Rodman and Inspector on cost work, etc.; Nov. 1918 to Oct. 1920 Inspector and Eng. Accountant, in Asst. Engr.'s offices at Baltimore and Cumberland, Md., Clarksburg, W. Va., and Philadelphia, Pa., and on reconstruction of thawing shed at Arling-

ton, N. Y.; April 1921 to July 1923 (except March and April 1922 on furlough) Inspector on reconstruction of east and west ends, Fairmount Park Tunnel, plans for future structures; construction of warehouse, Philadelphia, fruit and auction rooms, Pier No. 22, Philadelphia, Bridge 87-B, Collindale, Pa., and grain elevator at Baltimore; since July 1923 Transitman in charge of field work on construction and reconstruction of bridges, Cumberland Div., at times in charge of office, extension to tie-treating plant, Green Spring, W. Va., construction of under-grade crossings, water-treating plants, railroad, etc., situation plans for bridges, etc. (given in detail in application); since Jan. 1927 in charge of field work, 2d track, Dickerson to Point of Rocks, Md., including grading structures and track work. *TT 9.5: SP 1.9: P 7.6: RC 4.* Refers to T. Bloecher, Jr., E. G. Carey, E. J. Dougherty, W. W. Gwathmey, Jr., R. Mather.

854

(5) JORY, JOHN GODFREY, 2628 North Charles St., Baltimore, Md. (Age 22. Born Baltimore, Md.) 1927 B. E., Johns Hopkins Univ. *TT 2: SP 2.* Refers to J. H. Gregory, H. G. Perring, J. T. Thompson.

855

(1) KAMPF, MORRIS, 317 East Thirteenth St., New York City. (Age 32. Born Lemberg, Poland.) 1924 C. E., Pol. Inst. of Brooklyn. *TT 2: SP 2.* May 1913 to April 1916 with Herbert C. Keith, Cons. Engr., New York City, as Draftsman and Computer of strains and stresses on miscellaneous bridges on line of New York, New Haven & Hartford R. R. *TT 2.9: SP 2.9.* April 1916 to Jan. 1920 Designer and Checker of designs on building work, Westinghouse, Church, Kerr & Co., Engrs. and Contrs., New York City. *TT 3.7: SP 0.2: P 3.5: RC 2.2: D 1.5.* Jan. 1920 to Feb. 1924 with James Stewart & Co., Contrs., New York City, as Designing Engr. on structures ranging from forms and construction plant layout to design of \$2 000 000 boiler plant. *TT 4.1: P 4.1: D 4.1.* June 1924 to date with F. D. Hyde, Inc., Gen. Contrs., New York City, as Asst. to Pres. and Mgr. of construction operations on railroad terminals and stations. *TT 3: P 3: RC 3. TT 15.7: SP 5.1: P 10.6: RC 5.2: D 5.6.* Refers to P. Clow, H. C. Keith, G. Pinner, J. L. Parker, G. J. Ray.

856

(13) KANE, CLYDE VERNON, 2325 McGee Ave., Berkeley, Cal. (Age 25. Born Albuquerque, N. Mex.) 1927 B. S., Univ. of Cal. *TT 2: SP 2.* May 1923 to Aug. 1924 Head Chainman, Southern Pacific Co., chaining and running instruments. Summer 1926 Rodman with Roberts, Robinson & Rohl, Contrs. for construction of Oakland to Alameda subway, surveying and drafting. *TT 1.3: SP 1.3. TT 3.3: SP 3.3.* Refers to R. E. Davis, C. Derleth, Jr.

857

(1) KAROLAK, ALPHONSE, 1840 Myrtle Ave., Brooklyn, N. Y. (Age 27. Born Brooklyn, N. Y.) 1925 B. S. in M. E., and 1927 B. S. in C. E., Cooper Union Night School. May 1925 to Feb. 1926 Engr.-Draftsman, International Motor Co., Long Island City, N. Y., tracing, drafting and designing auto bus engines and bodies. *TT 0.7: SP 0.2: P 0.5: D 0.5.* Feb. 1926 to date Engr.-Draftsman, Board of Transportation, New York City, designing and drafting for rapid-transit systems, including subways and elevated. *TT 1.4: P 1.4: D 1.4 TT 2.1: SP 0.2: P 1.9: D 1.9.* Refers to F. E. Foss, G. Morrison, J. P. J. Williams.

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(2) KARP, EDMUND ISIDORE, 352 Lowell St., Lawrence, Mass. (Age 21. Born Meropol, Russia.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to H. K. Barrows, C. M. Spofford.

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(13) KEEFER, CHAUNCEY TENNENT, 58 Sutter St., San Francisco, Cal. (Age 41. Born St. Louis, Mo.) 1914 A. B. in Mech. Eng., Stanford Univ. *TT 2: SP 2.* 1909 Machinist, Toolmaker and Steam-Plant Engr. June to Oct. 1914 experimental work, Pacific Gas & Elec. Co., cooling houses by humidified air. *TT 0.5: P 0.5: RC 0.5.* Oct. 1914 to May 1916 Teacher, San Luis Obispo (Cal.) Polytechnic School, shop practice, mathematics and drawing. *TT 1.6: P 1.6.* Sept. 1916 to Feb. 1917 graduate student, Stanford Univ., made drawings for aero-dynamics laboratory, contributed to design and made drawings for dynamometer for testing airplane propellers. *TT 0.5: P 0.5.* Feb. to Aug. 1917 Engr., Spreckels Sugar Co., Salinas, Cal., on power-plant testing, structural design and plant layouts. *TT 0.5: P 0.5: RC 0.5.* Sept. 1917 to Jan. 1919 1st Lieut., Air Service, U. S. Army. March 1919 to May 1920 Machine Shop Foreman and Sales Engr., C. F. Braun Co., Mech. Engrs., Mfrs. of Heat Exchange Apparatus. *TT 1.2: P 1.2: RC 1.2.* May to Sept. 1920 Operator of small machine shop. *TT 0.4: P 0.4: RC 0.4.* Oct. 1920 to June 1924 Engr., Stanford Univ., in charge of heat, light, water, sewers, roads, buildings and grounds. *TT 3.5: P 3.5: RC 3.5.* June to Oct. 1924 building dwelling houses. *TT 0.4: P 0.4: RC 0.4.* Oct. 1924 to March 1925 Eng.

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Draftsman, Pacific Portland Cement Co., in charge of plotting San Francisco Bay oyster shell deposits, structure design. *TT 0.5: P 0.5: RC 0.5.* March to June 1925 Eng. Draftsman, Santa Cruz Cement Co., structure design. *TT 0.3: P 0.3.* June 1925 to date Engr., Cement Gun Constr. Co. of California, being Designer, Field Engr. and Sales Engr. *TT 2: P 2: RC 2. TT 13.4: SP 2: P 11.4: RC 8.8.* Refers to F. H. Fowler, E. F. Halloran, W. B. McMillan, C. D. Marx, R. M. Morton, R. U. St. John, F. B. Smith

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(1) **KELLBERG, FREDERICK WILLIAM**, 357 Ninth St., Brooklyn, N. Y. (Age 27. Born Seattle, Wash.) 1923 B. S., Univ. of Cal. *TT 2: SP 2.* May to Nov. 1923 Inspector, Warren Bros. Co., Oakland, Cal., on asphaltic concrete road work. *TT 0.5: SP 0.5.* Dec. 1923 to June 1924 Structural Draftsman with Geo. J. Calder, Cons. Engr., Sacramento, Cal., some minor designing. *TT 0.6: SP 0.6.* Sept. 1924 to Aug. 1925 and Feb. to May 1926 Structural Designer with M. W. Sahlberg, Sacramento, on steel and concrete buildings. *TT 1.3: SP 1.3: D 1.3.* Oct. 1925 to Jan. 1926 Draftsman and Inspector, American Toll Bridge Co., San Francisco, Cal., in office of Res. Engr. at Carquoinez Bridge. *TT 0.3: SP 0.3.* Aug. 1926 to Jan. 1927 Structural Designer, William Mooser Co., San Francisco, on structural elements of steel-concrete buildings. June 1927 to date Draftsman, Gen. Baking Co., New York City. *TT 0.5: SP 0.5: D 0.5.* *TT 5.2: SP 5.2: D 1.8.* Refers to C. Derleth, Jr., M. W. Sahlberg, F. D. Talbot.

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(15) **KELLY, THOMAS JAMES**, Box No. 1, San Angelo, Tex. (Age 32. Born Kankakee, Ill.) 1919 B. S. in C. E., Agri. and Mech. Coll. of Tex. *TT 2: SP 2.* About 4 months Chairman, Texas & Pacific R. R., 1919 to 1920 Instrumentman with Calvin E. Cock, on preliminary work for highways in Delta and Baylor Counties, Tex. *TT 0.7: P 0.7.* 1920 to Oct. 1921 County Engr., Baylor County, Tex., in charge of design and construction. *TT 1.7: P 1.7: RC 1.7: D 1.7.* Oct. 1921 to date with Tom Green County, Tex., until Sept. 1922 as Bridge Inspector, then Asst. County Engr. and since Dec. 1923 County Engr., on design and construction of highways and bridges. *TT 5.5: P 5.5: RC 3.4: D 4.6.* *TT 9.9: SP 2: P 7.9: RC 5.1: D 6.3.* Refers to C. E. Cock, G. H. Gilchrist, J. C. Nagle, J. M. Nagle, J. J. Richey, G. G. Wickline.

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(1) **KEMAL, ACHKI**, 2 West 101st St., New York City. (Age 33. Born Constantinople, Turkey.) 1920 B. S. C. E., Ohio Northern Univ. *TT 2: SP 2.* 1917 to 1919 Mech. Draftsman, Detroit Trailer Co. and (1 year) Dodge Motor Car Co., Detroit, Mich., detailing parts, layout, chassis and dump bodies. *TT 1.6: SP 1.6.* 1920 Structural Steel Designer, Detroit Edison Co., on power-house design and detail. *TT 0.5: P 0.5.* 1920 to 1922 Constr. Engr., Paul Straitis & Co., Detroit, on alteration and construction of dwellings, on plans, estimates, specifications and supervision. *TT 1.1: P 1.1: RC 1.1.* 1922 to 1924 Asst. Constr. Engr., Standard Oil Co. of New York, at Constantinople, on construction of dam, tanks, warehouses, maps and surveys. *TT 1.7: P 1.7: RC 1.7.* 1924 to 1925 Structural Steel Draftsman with Levering & Garrigues, New York City, on design and detail of steel structures. *TT 1: P 1.* 1925 to 1927 Chf. Draftsman, R. W. Hebard & Co., Inc., New York City, at Managua, Nicaragua, on sewers, water-works and street design. *TT 1.9: P 1.9: D 1.9.* *TT 8.8: SP 3.6: P 5.2: RC 2.8: D 1.9.* Refers to H. W. Durham, R. W. Hebard, V. Lemay, G. S. Rinehart, W. D. Volk, H. C. Willcox.

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(3) **KIKUCHI, KAWORU**, Care, American Bridge Co., Elmira Heights, N. Y. (Age 29. Born Yamagataken, Japan.) 1922 Graduated from School of Eng., Toohoku Imperial Univ. 1926 M. S. in C. E., Univ. of Wis. *TT 2: SP 2.* March 1922–March 1925 with Bureau of Public Works (2 years) and Bureau of Reconstruction of Capital (1 year), Dept. of Home Affairs, Tokyo, Japan, until April 1923 as Asst., then Associate and after April 1924 Asst. Engr., 6 months on topographical survey, acting as Instrumentman, 1 year acting as Designer's Asst. on irrigation work on Tama River, and on reinforced concrete frame open and closed culverts and retaining wall, over 3 months investigating affect of earthquakes on reinforced concrete and steel structures, 3 months acting as Supt. on reinforced concrete protection bank and earth embankment, 5 months on new street location and rewidening of a canal, acting as Instrumentman supervising surveying and 7 months directing drafting, estimating, writing specifications and contracting papers for Hitotsubashi, Chiyodabashi and Cyajibashi Bridges. *TT 3: SP 1.2: P 1.8: RC 1.2.* *TT 5: SP 3.2: P 1.8: RC 1.2.* Refers to W. A. Bassett, C. Moniwa, H. W. Preston, L. S. Smith, F. E. Turneaure, L. F. Van Hagan, J. A. L. Waddell.

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(9) **KIMBERLY, ALBERT ELLIOTT**, 1102 Atlas Bldg., Columbus, Ohio. (Age 52. Born New Haven, Conn.) 1897 S. B., Mass. Inst. Tech. *TT 2: SP 2.* June 1897 to June 1904 at Lawrence Experiment Station, Massachusetts State Board of Health; 1 year in dyestuff busi-

ness. *TT 6: P 6.* June 1904 to April 1906 at sewage testing station, Columbus, Ohio, on investigations of sewage treatment, water purification and softening; Local Editor of report, under Hering & Fuller. *TT 1.7: P 1.7.* April 1906 to Dec 1910 with Ohio State Board of Health, until April 1908 as Special Asst. Engr. investigating operation of sewage-treatment works, water-softening plants, etc., then Asst. Engr. reviewing plans for water supply, water purification, sewerage and sewage treatment; one of three conducting sanitary survey of Mahoning River, including gaugings. *TT 4.6: P 4.6.* Jan. 1911 to June 1913 member of firm, Burgess, Kimberly & Long, Cons. San. Engrs. *TT 2.5: P 2.5: RC 2.5: D 2.5.* June 1913 to date Cons. San. Engr. on design, consultation, expert testimony and general field supervision of construction of sanitary engineering, including report for Ohio River Sanitary Comm. of Ohio, on water supplies and sewage disposal, Ohio River, sewage disposal at Cincinnati, design of sewage-treatment plants, water distribution systems, water softening plants, sewers, two 1 000 000-gal. filter plants, dams, pumping stations, etc., for various cities and a number of state and county institutions; dairy waste-disposal plants for number of milk companies, etc.; dam, water supply, sanitation, power and electric light, Boy Scout Camp, Columbus, Ohio; Referee Engr. to City of Greenville, and to State Dept. of Health in case, Lancaster vs. State Dept. of Health; Chairman, Columbus Chamber of Commerce Committee on Intensive Development, Ohio water resources; Consultant to Circleville Water Co., typhoid fever litigation, appraisal work for Kent Water Supply Co.; Chf. Engr., sewerage and sewage disposal, Q. M. Corps, Ohio National Guard, Camp Willis; Cons. Engr. to Ohio Cannery Association and to Ohio Dairy Products Association on waste disposal, etc. *TT 13.8: P 13.8: RC 13.8: D 13.8.* *TT 30.6: SP 2: P 28.6: RC 16.3: D 16.3.* Refers to E. G. Bradbury, P. Burgess, A. W. Cuddeback, W. H. Dittoe, G. W. Fuller, P. Hansen, G. A. Johnson, L. Lee, L. Pearse, F. H. Waring.

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(13) **KNAPPEN, THEODORE TEMPLE**, Emigrant Gap, Cal. (Age 26. Born Minneapolis, Minn.) Diploma, U. S. Mil. Acad., West Point, N. Y. 1922 C. E., Rens. Pol. Inst. *TT 2: SP 2.* Jan. to June 1921 Lieut., 12th Engrs. U. S. Army, at Camp Grant, Ill., moving buildings, small building construction and (1 month) Co. Commander, and June 1922 to March 1923 1st Lieut., Co. E, 6th Engrs., U. S. Army, at Ft. Winfield Scott, San Francisco, being Instructor in Summer Training Camps, Constr. Officer on road maintenance and grading riding field, Instructor, 9th Corps Area Correspondence School (Sept. 1922-Feb. 1923), in charge of survey, Giggling Res., Monterey (Feb.-March 1923). *TT 1.4: SP 0.5: P 0.9: RC 0.1.* March to June 1923 Engr., Duplex Constr. Equipment Co. *TT 0.2: SP 0.2.* July to Oct. 1923 Contr. for construction of a store building, Burlingame, Cal. *TT 0.3: P 0.3: RC 0.3.* Nov. 1923 to Feb. 1924 Engr., Scales (Cal.) Hydraulic Mine. *TT 0.4: P 0.4: RC 0.1.* May to June 1924 Field Draftsman, Standard Lumber Co. *TT 0.1: SP 0.1.* Aug. 1924 to Feb. 1925 Draftsman, Gordon Valley Project, City of Vallejo, Cal. *TT 0.7: SP 0.7.* Oct. to Nov. 1925 Asst. Engr., Great Western Power Co., in charge of building valuation. *TT 0.2: P 0.2.* May to Sept. 1925 and Dec. 1925 to date with Fred H. Tibbetts, Chf. Engr. of Nevada Irrigation Dist., until Sept. 1925 as Draftsman, detailing drawing plans and writing specifications: Dec. 1925 to March 1926 Asst. Engr. in charge of plans, Bowman Spaulding Conduit; and since April 1926 Div. Engr. in charge of location and construction of diversion works and 2½ miles of flume, Bowman-Spaulding Conduit and Bowman Spaulding Arch Dam (approx. \$500 000 under construction). *TT 1.8: SP 0.1: P 1.7: RC 1.1.* *TT 7.1: SP 3.6: P 3.5: RC 1.6.* Refers to E. E. Blackie, F. M. S. Johnson, R. Matthew, C. J. Rhodin, F. C. Shenehon, F. H. Tibbetts, R. G. Wadsworth.

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(10) **KOENIG, OSKAR PAUL**, 1258 Druid Pl., Atlanta, Ga. (Age 26. Born Altenburg, Germany.) 1925 C. E., Univ. of Dresden. *TT 2: SP 2.* March 1919 to April 1921 Draftsman, Deutsche Erdoel Q. G., Rositz Thueringer, Germany, on industrial structures. *TT 2.1: SP 2.1: D 1.1.* April 1921 to April 1922 Asst. Supt., Wayss & Freytag A. G. Dresden, Baustelle Niehammer Kriebstein. *TT 1: SP 1.* April 1925 to May 1926 Designer, Monierbau A. G., Cassel, Germany, on bridge and industrial structures. *TT 1.1: P 1.1: RC 1.1: D 1.1.* May 1926 to Jan. 1927 Asst. Supt., Fontain Theatre and hotel building, Cincinnati, Ohio. *TT 0.7: P 0.7.* Jan. 1927 to date Asst. Engr., Bridge and Bldg. Dept., Atlanta & Westpoint R. R., Atlanta, Ga. *TT 0.2: P 0.2: D 0.2.* *TT 7.2: SP 5.1: P 2.1: RC 1.1: D 2.5.* Refers to C. E. Kauffmann, M. J. Macnabb, F. H. McDonald, H. O. Robison, S. R. Young.

867

(13) **KOONTZ, MELVIN ARTHUR**, 570 Neilson St., Berkeley, Cal. (Age 25. Born Los Angeles, Cal.) 1927 B. S. in Civ. Eng., Univ. of Cal. *TT 2: SP 2.* Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, F. S. Foote, C. G. Hyde.

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(6) KORNMAN, LAURENCE HENRY, 906 Grandview Ave., Pittsburgh, Pa. (Age 24. Born Pittsburgh, Pa.) 1927 B. S. in C. E., Carnegie Inst. Tech. TT 2: SP 2. Refers to F. M. McCullough, C. B. Stanton.

869

(11) LAMB, JOHN FEREBEE, Box 7, Imperial, Cal. (Age 35. Born Elizabeth City, N. C.) 1915 to 1917 student in Civ. Eng., Georgia School of Technology. TT 0.6: SP 0.6. 1918 to 1920 Rodman, Chainman, Instrumentman, and Jun. Civ. Engr., Interstate Commerce Comm., Bureau of Valuation, on field inventory and classification, office computation and drafting, railroad track material, culverts, tunnels and earthwork. TT 2: SP 2. 1920 to 1923 with U. S. Reclamation Service, as Recorder on surveys, structure drafting and computations and (over 1 year) Asst. Engr. in charge of engineering and construction, Lower Mesilla Valley, Rio Grande Project. TT 3.4: SP 2.3: P 1.1: RC 1.1. 1923 to date with Imperial Irrigation Dist., 1½ years as Draftsman and Transitman on drainage investigations and construction, then Structure Foreman, directing foremen and selecting methods of construction for bridges, flumes, culverts, siphons, checks, etc. TT 3.4: SP 1.8: P 1.6: RC 1.6. TT 9.4: SP 6.7: P 2.7: RC 2.7. Refers to M. J. Dowd, L. M. Lawson, D. W. Murphy, F. D. Pyle, S. L. Rothery, F. W. Slattery.

870

(1) LANDERS, CHARLES SCOTT, 292 Madison Ave., New York City. (Age 47. Born Thurmont, Md.) 1900 Ph.B., and 1904 C. E., Sheffield Sci. School. TT 2: SP 2. June to Dec. 1900 Rodman, New York, New Haven & Hartford R. R. TT 0.5: SP 0.5. Jan. 1901 to May 1903 Instrumentman, Designer and Res. Engr., Guayaquil & Quito Ry. of Ecuador. TT 2.4: SP 0.9: P 1.5: RC 0.5: D 1. Sept. 1903 to June 1904 graduate student and Instructor in Eng., Sheffield Scientific School. TT 0.8: P 0.8: RC 0.8. July 1904 to Feb. 1906 Chf. of Party, Pennsylvania R. R. Tunnels. TT 1.6: P 1.6: RC 0.8: D 0.8. Feb. 1906 to May 1907 Engr. and Supt., The Foundation Co., New York City, on pneumatic caisson foundations. TT 1.4: P 1.4: RC 1.4. June 1907 to Sept. 1909 Engr. and Designer, Board of Water Supply, New York City, on Catskill Aqueduct. TT 2.2: P 2.2: RC 2.2. Oct. 1909 to July 1911 Cons. Engr., Hildreth & Co. TT 1.8: P 1.8: RC 1.8. Aug. 1911 to July 1918 in private practice, pneumatic caisson foundations and general engineering, including large development for W. W. Astor estate in the Bronx (\$900 000). TT 6.8: P 6.8. Aug. 1918 to Sept. 1921 in export business. Sept. 1921 to date in private practice of engineering, New York and vicinity, caisson foundations, reinforced concrete structures, design, supervision, etc. TT 5.5: P 5.5. TT 25: SP 3.4: P 21.6: RC 5.5: D 4. Refers to W. J. Boucher, H. J. Deutschbein, A. D. Flinn, J. A. Foulks, G. R. Johnson, C. R. Krieg, D. E. Moran, R. Ridgway.

871

(1) LANGTHORN, JACOB STINMAN, Jr., 15 West Thirty-Eighth St., New York City. (Age 30. Born Brooklyn, N. Y.) July to Sept. 1915 Rodman, New York State Highway Comm. TT 0.3: SP 0.3. June to Dec. 1916 Rodman, Holbrook, Cabot & Rollins Corporation, on subway construction. TT 0.6: SP 0.6. Jan. to May 1917 Draftsman, E. W. Bliss Co., on structural and mechanical work. TT 0.4: SP 0.4. Aug. to Sept. 1919 Asst. Plant Supt., timekeeping, etc., and June 1920 to Aug. 1922 on costs, purchasing, expediting and estimating on highway work, all for Langthorn Co. TT 2.4: SP 2.4. Aug. 1922 to Dec. 1923 with New York Telephone Co., until March 1923 as Accountant, then Asst. Engr. forecasting expenditures for new plant and construction. TT 0.8: SP 0.8. Jan. 1924 to date Treas. and Vice-Pres., Langthorn & Smith, Inc., building construction, estimating, purchasing, costs and general supervision. TT 3.4: SP 1.4: P 2: RC 2. TT 7.9: SP 5.9: P 2: RC 2. Refers to H. E. Breed, S. K. Clapp, J. K. Finch, J. S. Langthorn, T. Merriman, J. F. Murphy.

872

(10) LANICCA, WIELAND BORWELL, Jr., Box 885, Auburn, Ala. (Age 21. Born Sherman, Tex.) 1927 B. S. in Civ. Eng., Ala. Pol. Inst. TT 2: SP 2. Refers to C. A. Baughman, J. A. C. Callan.

873

(13) LARSEN, IRA HENRY 68 Post St., San Francisco, Cal. (Age 31. Born San Francisco, Cal.) 1919 A. B., Stanford Univ. TT 2: SP 2. May 1919 to March 1920 Asst. Supt. of Constr. with J. S. Sampson, San Francisco, Cal., on reinforced concrete office building construction. TT 0.9: SP 0.5: P 0.4: RC 0.3: D 0.1. March 1920 to July 1921 and Sept. 1921 to Jan. 1922 Draftsman with Fred H. Tibbetts, San Francisco, on design and investigations of irrigation and water-supply projects. TT 1.7: SP 0.3: P 1.4: RC 0.7: D 0.7. July to Sept. 1921 Draftsman Pacific Fruit Express Co. on ice plants and ice-handling machinery, plans and construction. TT 0.2: SP 0.1: P 0.1: RC 0.1. Jan. to

March 1922 Asst. Engr. on sub-station design, Pacific Gas & Elec. Co. TT 0.3: P 0.3: D 0.3. March 1922 to date with H. H. Larsen Co., until June 1922 as Supt. of Constr. on lumber mill, steam power houses, dry kilns, etc. and since then member of firm, general contracting and construction engineering. TT 5.1: P 5.1: RC 5.1. TT 10.2: SP 2.9: P 7.3: RC 6.2: D 1.1. Refers to N. D. Baker, C. D. Marx, R. I. Meyerholz, R. A. Monroe, I. C. Steele, F. H. Tibbetts.

874

(1) LAUBE, CHARLES JOSEPH, 115 East Mosholu Parkway North, New York City. (Age 29. Born Boebikon, Switzerland.) 1921 C. E., L'Ecole Polytechnique, Zurich, Switzerland. TT 2: SP 2. July 1921 to July 1924 with W. Luder, Cons. Engr., Solothurn, Switzerland, on design and supervision of reinforced concrete bridges, buildings, etc. TT 3: P 3: RC 3: D 3. July 1924 to May 1925 Designer on reinforced concrete school buildings, etc., McCoy Sales, New York City. TT 0.8: P 0.8: D 0.4. May to Aug. 1925 Bridge Designer for structural steel, New Jersey State Highway Comm. TT 0.3: P 0.3: D 0.3. Aug. 1925 to date Designer, with Weinberger & Weishoff, Cons. Engrs., New York City, in charge of design of theatres, office buildings and hotels; had charge of branch office in Chicago for design of theatre and 12-story hotel. TT 1.7: P 1.7: RC 1.7: D 1.7. TT 7.8: SP 2: P 5.8: RC 4.7: D 5.4. Refers to T. Barbato, P. E. Gisiger, A. H. Rhett, L. R. Shellenberger, S. Weishoff.

875

(13) LEAK, HOWARD SWINK, 1301 Arnold St., Susanville, Cal. (Age 23. Born Rocky Ford, Colo.) 1927 B. S. in C. E., Univ. of Nev. TT 2: SP 2. Refers to F. L. Bixby, H. P. Boardman.

876

(3) LECLAIRE, JOSEPH PAUL, 235 Wolseley St., Montreal West, Quebec, Canada. (Age 46. Born Montreal, Que., Canada.) 1902 B. A. Sc. in C. E., Pol. School, Univ. of Montreal. TT 2: SP 2. July 1902 to 1904 Draftsman, successively with Phoenix Bridge Co., Montreal, McClintic and Marshall, Pittsburgh, Pa., Cambria Steel Co., Johnstown, and Canadian Pacific Ry. Co., Montreal. TT 1.7: SP 1.7. 1904 to 1911 Designing Engr., Dominion Bridge Co., Montreal. TT 7.7: P 7.7: D 7.7. Dec. 1911 to date with Harbour Commrs. of Montreal, in charge of design of elevated railway (2 months) and of buildings, bridges and water supply of harbor (10 years); Feb. 1922 to March 1924 Asst. Chf. Engr., and since 1924 Chf. Engr. TT 15.5: P 15.5: D 15.5. TT 26.9: SP 3.7: P 23.2: RC 15.5: D 23.2. Refers to J. L. Busfield, F. W. Cowie, J. M. R. Fairbairn, O. O. Lefebvre, C. N. Monsarrat, F. P. Shearwood, A. Surveyer.

877

(10) LESLIE, JAMES BOOTH, Jr., Box 631, Auburn, Ala. (Age 21. Born Troy, Ala.) 1927 B. S. in Civ. Eng., Ala. Pol. Inst. TT 2: SP 2. Refers to C. A. Baughman, J. A. C. Callan.

878

(5) LeSUEUR, BENJAMIN WILMAR, 149 West Lanvale St., Baltimore, Md. (Age 22. Born Baltimore, Md.) 1927 B. S., Univ. of Md. TT 2: SP 2. Refers to A. N. Johnson, S. Purcell.

879

(13) LEVY, EDWIN FELIX, 727 Seventeenth Ave., San Francisco, Cal. (Age 22. Born San Francisco, Cal.) 1927 B. S. in Civ. Eng., Univ. of Cal. TT 2: SP 2. May 1927 to date Timekeeper, Clerk, etc., P. J. Walker Co., on construction. TT 0.2: SP 0.2 TT 2.2: SP 2.2. Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, F. S. Foote, S. T. Harding, C. G. Hyde, B. Jameyson.

880

(1) LIU, YI, Tientsin Pukow Ry., Liang Wang Chuang Station, Chihli, China. (Age 34. Born Tientsin, China.) B. S., Tangshan, China, Eng. Coll. 1918 M. S., Civ. Eng. Dept., Univ. of Ill. TT 2: SP 2. Summer 1917 Draftsman, Chicago & Alton R. R. June 1918 to April 1920 Draftsman and Checker, Chicago & Eastern Illinois R. R., Chicago, Ill. TT 1.9: SP 1.9. May to Sept. 1920 Jun. Highway Engr., Illinois State Highway Dept., laying grade plans, estimates, culverts, acting as Rodman of survey party. TT 0.4: SP 0.4. Oct. 1920 to March 1922 Jun. Highway Engr., Michigan State Highway Dept., laying grade plans, estimate yardage, culverts and cost; Instrumentman of survey and slope stake parties; Asst. to Res. Engr. TT 1.5: SP 1.5. June 1922 to March 1923 Chf. of survey party and Engr. in charge of 1st Dist. of Tsingtao Municipal Govt., making survey of city, maintaining and building bituminous macadam pavement. TT 0.8: SP 0.5: P 0.3: D 0.3. April 1923 to date with Tientsin Pukow Ry., Tientsin, China, until Oct. 1924 as Chf. Draftsman on design of all bridges of Northern Sec., and in charge of drafting and computations for other designs, and since Nov. 1924 Asst. Engr. to Dist. Engr. on office work, in charge of building military

sidings, repairing one 45-m. bridge and repairing and rebuilding 30 miles of tracks; 2 months acted as Sec. Engr. *TT 4.2: P 4.2: RC 4.2: D 0.5. TT 10.8: SP 6.3: P 4.5: RC 4.2: D 0.8.* Refers to W. C. Brockway, F. H. Newell, E. D. Rich, C. M. Slaymaker, N. Van Eenam.

881

(7) **LIVINGSTON, PENN POORE**, Elk Mound, Wis. (Age 27. Born Elk Mound, Wis.) 1922 B. S. in C. E., Univ. of Wis. *TT 2: SP 2.* June to Aug. 1922 Asst. City Engr., Rhinelander, Wis., on survey and layout of water and sewer system, paving, etc. *TT 0.2: P 0.2.* Sept. 1922 to date with U. S. Geological Survey, until July 1924 as Jun. Engr., at Chattanooga, Tenn., on surface waters investigation and study of stream flow, then Asst. and Jun. Engr. at Honolulu, Hawaii, on similar work, and since March 1926 Artesian Well Engr. (Asst. Engr.), Div. of Hydrography, Hawaii, in responsible charge of artesian water investigation, maintenance, drilling, sealing, special tests on artesian wells, waste prevention. *TT 4.8: P 4.8: RC 1.4. TT 7: SP 2: P 5: RC 1.4.* Refers to H. A. R. Austin, J. H. Foss, N. C. Grover, J. C. Hoyt, W. R. King, J. L. Lamson, G. K. Larrison, F. Ohrt.

882

(10) **LOGAN, ROBERT FRANKLIN**, Yadkinville, N. C. (Age 23. Born Yadkinville, N. C.) 1927 B. S. in C. E., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, H. F. Janda.

883

(4) **LOVE, JOSEPH WARNER EDWARDS**, 144 East Oak Ave., Moorestown, N. J. (Age 46. Born Moorestown, N. J.) 1901 B. S. in Eng., and 1904 C. E., Swarthmore Coll. *TT 2: SP 2.* 1901 to 1905 with Bureau of Filtration, Philadelphia, Pa., on lines and grades, reports, estimates, etc., as Transitman and Third Asst. Engr., at Oak Lane Reservoir, Ladner's Point Pumping Station, and finally Torresdale Intake Conduit. *TT 3.7: SP 3.7.* 1905 to 1906 with American Pipe Mfg. Co., giving lines and grades and making monthly estimates on street railway extension (about 5 miles) at Greenville, S. C., and later on Wood's Creek Reservoir at Paris, Md. *TT 1.8: SP 1.8.* 1906 Archt.'s Representative, Atlantic City (N. J.) Hippodrome. *TT 0.2: SP 0.2.* 1906 to 1907 with Scofield Co., first at Norfolk, Va., had entire charge, but did not entirely complete, building of 10 500-kw. power plant, later at Jamestown Exposition in charge of Historical Arts Bldg. (fireproof). *TT 0.9: P 0.9: RC 0.9.* Summer 1907 Foreman on sewer construction at Baltimore, Md., for M. A. Talbot. *TT 0.3: SP 0.3.* 1907 to 1908 Res. Engr., Atlantic, Gulf & Pacific Co., Long Beach, N. Y., setting ranges for dredges and assisting with estimates. *TT 0.2: SP 0.2.* Feb. 1908 to Dec. 1916 Estimator, Supt. of Constr. and Structural Engr., Keystone Fireproofing Co., and Dec. 1916 to date Secy., and at present Pres., Keystone Gypsum Fireproofing Corporation; designed fireproof floors and roofs for manufacturing buildings, garages and theatres. *TT 19.2: SP 1: P 18.2: RC 5: D 10. TT 25.5: SP 9.3: P 19.2: RC 5.9: D 10.* Refers to J. H. M. Andrews, F. C. Dunlap, J. L. Fawley, W. H. Gravell, G. F. Pawling, W. L. Webb, B. White.

884

(11) **LYNCH, PAUL JOSEPH**, Water Users Bldg., Phoenix, Ariz. (Age 41. Born Dunkirk, N. Y.) 1907 to 1910 student, Syracuse Univ. *TT 1: SP 1.* 1903 to 1906 Designing Draftsman, American Locomotive Co., Dunkirk, N. Y. *TT 3: SP 3: D 1.* 1910 to 1911 Transitman, Chicago, Milwaukee & St. Paul R. R. Co. *TT 1: SP 1.* 1911 to 1912 Chf. of Party, J. G. White & Co., River Mill Dam, Ore. *TT 1: SP 1.* 1912 to 1917 Asst. Engr., Southern Pacific Ry. Co., San Francisco, Cal., on design and construction of tunnels, bridges and structures. *TT 6: P 6: RC 2: D 2.* 1917 to 1919 First Lieut. and Capt., Corps of Engrs., U. S. Army, in France, in charge of design and construction of docks, railroad terminals, water supply and steam power plants. *TT 2: P 2: RC 2.* 1920 to date Asst. Gen. Supt., Salt River Valley Water Users Association, Phoenix, Ariz., on construction and design of development (\$20 000 000), principal work being raising spillways of Roosevelt Dam 15 ft., Mormon Flat and Horse Mesa (arch) Dams (225 and 306 ft.), and four hydro-electric power plants (total 80 000 h. p.). *TT 7: P 7: RC 7. TT 21: SP 6: P 15: RC 11: D 2.* Refers to J. W. B. Blackman, W. H. Code, C. C. Cragin, J. B. Girand, L. C. Hill, F. J. O'Hara, C. R. Olberg, G. E. P. Smith.

885

(6) **LYON, RICHARD BONHAM**, 17 Petrolia St., Bradford, Pa. (Age 24. Born Mt. Jewett, Pa.) 1927 B. S., Pa. State Coll. *TT 2: SP 2.* Oct. to Dec. 1923 Instrumentman with E. B. James, acting as Transitman on municipal and plant layout and railroad survey. *TT 0.2: SP 0.2.* Jan. to April 1924 Transitman with Paul P. Lyon, Bradford, Pa., survey and drafting on oil leases. *TT 0.3: SP 0.3.* April to Sept. 1924 Res. Engr. with William Hanley, on supervision of layout for construction of plant, railroad, mine, survey and drafting. *TT 0.4: SP 0.4. TT 2.9: SP 2.9.* Refers to R. O'Donnell, E. D. Walker.

886

(12) **MacDUFFEE, KARL MERRIEL**, Chelan, Wash. (Age 32. Born Conde, S. Dak.) 1926 B. S. in C. E., Des Moines Univ. *TT 2: SP 2.* May 1917 to July 1918 (while student) and Feb. 1919 to March 1920 with D. M. & C. I. Ry., Des Moines, Iowa, as Rodman, Instrumentman and Chf. of Party, on double tracking, sidings, spurs and industrial trackwork, maintenance of way structures, etc. *TT 1.1: P 1.1: RC 1.1: D 0.5.* July 1918 to Feb. 1919 Sgt. of Ordnance, U. S. Army, at U. S. Chemical Plant No. 4, Saltville, Va., made camp surveys, located building lines, foundations for machines in plant, in charge of drafting room, designed machine foundations, producer gas furnaces, details of plant construction. *TT 0.6: P 0.6: RC 0.6: D 0.6.* March 1920 to July 1926 Chf. of Party, County Engr.'s office, Polk County, Iowa, on highway and drainage surveys, estimates, design and construction; winter 1925 and 1926 also student, Des Moines Univ. *TT 5.7: P 5.7: RC 5.7: D 2.3.* Aug. 1926 to date with Washington Water Power Co. as Chf. of Party on lake surveys and tunnel construction and Res. Engr. on dam, Lake Chelan project. *TT 0.9: P 0.9: RC 0.9, TT 10.3: SP 2: P 8.3: RC 8.3: D 3.4.* Refers to A. L. Alin, V. H. Greisser, T. H. Judd, H. A. Rands, A. J. Turner.

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(15) **MacKENZIE, MORRELL**, 606 West Elmira St., San Antonio, Tex. (Age 32. Born Muscatine, Iowa.) Sept. 1913 to June 1915 student, Iowa State Coll. *TT 0.7: SP 0.7.* Vacations Rodman and Chainman on city surveys. June 1915 to June 1916 and Dec. 1916 to June 1917 detailing and estimating mill work, Roach & Musser Sash & Door Co., Muscatine, Iowa. *TT 1.5: SP 1.5.* June to Dec. 1916 reconnaissance and liaison work with National Guard on Mexican Border, and June 1917 to Dec. 1918 with Field Artillery, U. S. Army, on reconnaissance, liaison and signal work, and about 8 months instructing in army mapping, exterior ballistics and control of artillery fire. *TT 2: SP 1.3: P 0.7: RC 0.7.* Jan. 1919 to Feb. 1923 with Central States Eng. Co., Muscatine, as Engr. on surveys, hydraulic levees, drainage systems and pumping plants, and Draftsman in charge of office computations and drafting. *TT 4.1: SP 2.1: P 2: RC 1.7.* March 1923 to June 1925 in private practice, construction of concrete bridges, culverts, etc. *TT 2.2: P 2.2: RC 2.2.* June 1925 to date Supt., McKenzie Constr. Co., San Antonio, Tex., in responsible charge of construction of bridges, buildings, etc. *TT 2: P 2: RC 2. TT 12.5: SP 5.6: P 6.9: RC 6.6.* Refers to H. C. Beckman, J. S. Fenner, A. J. McKenzie, J. S. Morrison, W. E. Simpson, C. H. Young.

888

(2) **MacKENZIE, VERNON GORDON**, 550 Columbus Ave., Boston, Mass. (Age 21. Born Quincy, Mass.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to C. M. Spoford, R. G. Tyler.

889

(13) **MACEY, JOHN WILLIAM**, 1664 Larkin St., San Francisco, Cal. (Age 20. Born Carson City, Nev.) June 1924 to March 1926 Computor, Nevada State Dept. of Highways, on calculation of earthwork quantities and map drafting. *TT 1.7: SP 1.7.* April 1926-March 1927 Draftsman, Eng. Dept. and (after Oct. 1926) Valuation Dept., Southern Pacific Co., San Francisco, Cal. *TT 1: SP 1. TT 2.7: SP 2.7.* Refers to G. W. Borden, H. F. Holley, J. M. Kane, H. M. Loy, H. M. Mitchell.

890

(13) **McCLINTOCK, LEONARD EDGAR**, Box 637, Stanford University, Cal. (Age 20. Born Neosho, Mo.) 1927 A. B., C. E. Dept., Stanford Univ. Summer 1926 Draftsman, General Petroleum Corporation, Taft, Cal., map and shop drafting and transit work. *TT 2: SP 2.* Refers to J. C. L. Fish, C. Moser, L. B. Reynolds, E. C. Thomas, C. B. Wing.

891

(11) **McEAHERN, FRANCIS MICHAEL**, 771 South Downing St., Denver, Colo. (Age 22. Born Denver, Colo.) 1927 B. S. in C. E., Colo. Univ. *TT 2: SP 2.* Refers to R. L. Downing, F. R. Dungan, C. L. Eckel, H. J. Gilkey.

892

(8) **McFADDEN, RICHARD ROWELL**, Box 297, Havana, Ill. (Age 24. Born Havana, Ill.) 1927 B. S. C. E., Purdue Univ. Summer 1924 City Inspector, Havana, Ill., on concrete paving. Summer 1925 County Engr. and Inspector, concrete road at Bath, Ill., Mason and Tazewell drainage survey, Havana. *TT 2: SP 2.* Refers to C. A. Hart, R. B. Wiley.

893

(4) **McGARRIGLE, JOSEPH JAMES**, 3748 Manayunk Ave., Philadelphia, Pa. (Age 37. Born Philadelphia, Pa.) 1914 B. S. in C. E., Pa. State Coll. *TT 2: SP 2.* Dec. 1906 to Sept. 1910, college vacations, and June 1914 to March 1916 with American Bridge Co., Pencoed, Pa., as Special Apprentice, Bldg. and Constr. Dept., on fabricated steel buildings, etc. Structural Steel Draftsman on office and mill buildings and bridges, and (after June 1914) on structural steel design, checking and in charge of squad in drawing room on steel offices,

mill buildings, subways, elevateds and bridges. *TT 5.6: SP 3.8: P 1.8: RC 1.* March to Aug. 1916 with Lehigh Coal & Navigation Co., Lansford, Pa., in charge of design and supervision of erection of and of repairs to steel head frames, mine timber, engine and transformer houses. *TT 0.5: P 0.5: RC 0.5: D 0.5.* Sept. 1916 to July 1917 with Dept. of City Transit, Philadelphia, Pa., on design and approval of final steel and concrete members, Broad St. Subway, particularly City Hall Station. *TT 0.9: P 0.9: RC 0.9: D 0.9.* July 1917 to Jan. 1919 1st Lieut., C. A. C., U. S. Army, commanding Anti-aircraft Artillery Battery in France. *TT 1.5: P 1: RC 0.5: D 1.* Feb. 1919 to April 1922 with Midvale Steel & Ordnance Co., Philadelphia, General Sales Office, Fabricated Steel and Steel Freight Car Dept., and April 1922 to Aug. 1924 with Bethlehem (Pa.) Steel Co., Steel Freight Car and Tank Dept.; work comprised sales and engineering of design and application of finished product to engineering problems. *TT 5.7: P 5.7: RC 5.7.* Nov. 1924 to March 1926 Eastern Sales Mgr., Clark Car Co., Pittsburgh, Pa., and July 1926 to date Sales Engr., Magor Car Corporation, New York City; work involved sales and engineering practice in developing uses and methods for air dump cars with railroad and industrial and construction companies. *TT 2.2: SP 0.4: P 1.8: RC 1.8. TT 18.4: SP 7.2: P 11.2: RC 10.9: D 1.4.* Refers to W. F. Carson, F. L. Castleman, L. D. Draper, M. Golder, F. X. Kern, R. O'Donnell, R. L. Sackett, S. I. Sacks, S. Smith, P. H. Turnbull, E. D. Walker.

894

(11) **McMAHON, EDWARD OWEN**, 4305 Santa Fe Ave., Los Angeles, Cal. (Age 34. Born Eugene, Ore.) Licensed Surveyor, State of California. Sept. 1916 to July 1917 Chainman and Rodman, successively with Lumbermans Eng. Co., Portland, Ore., Atchison, Topeka & Santa Fe Ry., and Western Pacific R. R. Co. *TT 0.8: SP 0.8.* July 1917 to Feb. 1919 Chainman and Inspector on pile trestles, U. S. Army, spruce logging railroad construction. *TT 1.5: SP 1.5.* Feb. 1919 to April 1920 Instrumentman, Oregon State Highway Dept., Salem, Ore. *TT 1.2: SP 1.2.* April to Sept. 1920 with Howard McCurdy, Vernon, Cal., as Chf. of Party on surveys and paving construction. *TT 0.5: P 0.5.* Sept. 1920 to May 1922 with City of Santa Ana, Cal., until March 1922 as Asst. Engr. in charge of surveys, construction of sewers and paving, and assessments, then Asst. Street Supt. in charge of inspection and assessments. *TT 1.7: P 1.7: RC 1.2.* Aug. 1923 to July 1924 with W. H. Hoy, Santa Ana, as Asst. Engr. in charge of surveys and construction of subdivisions, sewers, roads, damsites, irrigation canals. *TT 1: P 1: RC 1.* May 1922 to Aug. 1923 and July 1924 to date with City Engr., Vernon, Cal., as Asst. Engr. in charge of surveys and construction of sewers, paving, water systems, subdivisions. *TT 3.9: P 3.9: RC 2.4. TT 10.7: SP 3.5: P 7.2: RC 4.7.* Refers to H. McCurdy, B. I. Means, N. H. Neff, H. M. Rigler, H. A. Thalimer, J. C. Wright.

895

(15) **MADDEN, EDWARD PEUCH**, 1228 North Rendon St., New Orleans, La. (Age 20. Born New Orleans, La.) 1927 B. E. in Civ. Eng., Tulane Univ. of La. Summer 1925 Draftsman, Boland Machine & Mfg. Co., Inc., New Orleans, La., on ornamental iron-work. Summer 1926 and May 1927 to date Structural Detailer, Lukens Steel Co., New Orleans. *TT 2: SP 2.* Refers to D. Derickson, W. B. Gregory, W. T. Hogg, F. A. Muth, G. P. Rice.

896

(2) **MALKASIAN, ZAVEN**, 249 Boylston St., Watertown, Mass. (Age 21. Born Brighton, Mass.) 1927 B. C. E., Northeastern Univ. *TT 2: SP 2.* Refers to E. A. Gramstorff, J. W. Ingalls.

897

(5) **MALONEY, CHARLES PATRICK**, 3817 Alton Pl., N. W., Washington, D. C. (Age 36. Born Washington, D. C.) 1913 B. S. in C. E., Catholic Univ. of America. *TT 2: SP 2.* 1913 to 1914 member of firm, Maloney-Robinson, Contrs., Washington, D. C. *TT 1: P 1: RC 1: D 1.* 1914 to 1918 Vice-Pres and Supt., Washington Asphalt Block & Tile Co. *TT 3.5: P 3.5: RC 3.5: D 3.5.* 1918 to 1919 member of firm, Costigan & Maloney, Washington, D. C., road and street work in District of Columbia, Maryland and Virginia. *TT 1.5: P 1.5: RC 1.5: D 1.5.* 1920 to date Pres. and Mgr., Maloney Paving Co., Inc.; firm has completed thirty-nine miles of concrete roads, including bridges, in Virginia, two bridges in Washington, D. C., sheet asphalt streets, sidewalks, excavating, etc. *TT 7.5: P 7.5: RC 7.5: D 7.5. TT 15.5: SP 2: P 13.5: RC 13.5: D 13.5.* Refers to G. B. Bright, S. Burnley, W. P. Darwin, G. A. Ricker, A. J. Scullen, H. G. Shirley.

898

(12) **MARION, ARMAND FRANCOIS**, 612 L. C. Smith Bldg., Seattle, Wash. (Age 49. Born Baltimore, Md.) Sept. 1898 to Jan. 1900 Rodman and Topographer, Northern Pacific R. R. *TT 1.3: P 1.3.* Jan. to Aug. 1900 Topographer and Instrumentman, Great Northern R. R. *TT 0.7: SP 0.7.* Aug. 1900 to Feb. 1906 Instrumentman and (2½ years) Asst. Engr., Pacific Coast Co. *TT 5.5: SP 3: P 2.5: RC 2.5: D 1.* Feb. 1906 to Feb. 1908 Asst. Engr., Oregon & Washington R. R. (Union Pacific). *TT 2: P 2: RC 2: D 2.* Feb. 1908 to Sept.

1914 in engineering and contracting business, until 1912 with Grant Smith & Co. as partner in construction of trunk sewer (\$950 000) in Seattle, and on railroad work (\$300 000), then alone. *TT 6.5: P 6.5.* Sept. 1914 to Sept. 1917 Asst. Engr., Oregon & Washington R. R. & Navigation Co. (Union Pacific). *TT 3: P 3: RC 3.* Sept. 1917 to date Chf. Engr., Pacific Coast Co. *TT 10: P 10: RC 10: D 10.* *TT 29: SP 5: P 24: RC 17.5: D 13.* Refers to F. H. Fowler, L. M. Grant, S. H. Hedges, E. B. Hussey, R. J. Middleton, W. C. Morse, S. Murray.

899

(10) **MARNER, PAUL BORSCHHELL**, Box 3008, West Palm Beach, Fla. (Age 24. Born Iowa City, Iowa.) 1924 B. E., State Univ. of Iowa. *TT 2: SP 2.* June 1924 to April 1925 Jun. Engr., San. Dist. of Chicago, Ill., supervising construction of large sewers and pumping stations; also Transitman on survey work. *TT 0.7: SP 0.7.* April 1925 to April 1926 Asst. San. Engr., New Hampshire State Board of Health, Concord, N. H., supervising operation and treatment of public water and sewage systems, also special public health investigation. *TT 1: SP 1.* April 1926 to date Asst. Engr., Bureau of Eng., Florida State Board of Health, Jacksonville, Fla., inspecting public water supplies and sewage-treatment plants, reviewing plans of water and sewerage system, salt marsh mosquito investigation, special investigation of state institutions, typhoid fever, etc.; has charge of East Coast office of the Bureau at West Palm Beach; recently had direct charge of fund (\$15 000) for emergency sanitation work in Broward and Dade counties. *TT 1: P 1: RC 0.2.* *TT 4.7: SP 3.7: P 1: RC 0.2.* Refers to F. J. Keis, R. B. Kittredge, H. M. Pirnie, H. S. Ripley, G. W. Simons, Jr., E. L. Waterman.

900

(6) **MARSH, BURTON WALLACE**, 907 City-County Bldg., Pittsburgh, Pa. (Age 29. Born Worcester, Mass.) 1920 B. S. in Civ. Eng., Worcester Pol. Inst. *TT 2: SP 2.* Sept. 1920 to June 1921 graduate work at Yale Graduate School. *TT 0.5: P 0.5.* Jan. 1922 to Nov. 1924 with Technical Advisory Corporation, Cons. Engrs., New York City, engaged as follows: Jan. to April 1922 Field Engr. on preliminary city planning survey of Worcester, Mass., gathering city planning data, office computations, analyses, etc.; April to Dec. 1922 Office Computer and Draftsman, until August on city planning contracts with Springfield and West Springfield, Mass., including work on maps, charts, diagrams, traffic studies, report, etc., then on zoning, traffic and housing studies in New Haven, Conn., and in New York office on consulting contracts; Dec. 1922 to Nov. 1924 Res. Engr. in Chg., on city planning contracts, until Sept. 1924 with City of Norfolk, Va., then with City of Dayton, Ohio, in charge of field surveys, zoning work, school, playgrounds and parks, preparation of basic maps, city development, traffic and thoroughfare studies, platting rules, etc. *TT 2.9: SP 0.9: P 2: RC 2: D 0.7.* Nov. 1924 to date Traffic Engr., City of Pittsburgh, in charge of Bureau of Traffic Planning, Dept. of Public Safety, design, locating and erection of traffic signs, signals, etc., studies, recommendations for improvements, minor street changes, etc., and at present directing a traffic survey. *TT 2.5: P 2.5: RC 2.5: D 2.5.* *TT 7.9: SP 2.9: P 5: RC 4.5: D 3.2.* Refers to A. W. French, E. P. Goodrich, W. Haydock, L. W. McIntyre, J. M. T. Rice, W. H. Taylor, D. L. Turner, W. A. Weldin.

901

(11) **MARTHENS, JOHN COWLEY**, 1740 Grape St., Denver, Colo. (Age 23. Born Pittsburgh, Pa.) 1927 B. S. in C. E., Univ. of Colo. *TT 2: SP 2.* Refers to R. L. Downing, F. R. Dungan, C. L. Eckel, H. J. Gilkey.

902

(9) **MARTIN, HENRY KAUTZ**, Box 441, Portsmouth, Ohio. (Age 26. Born Farmer, Ky.) Jan.-April 1918 Rodman with Powell & Clarke, Civ. and Min Engrs., Ashland, Ky. *TT 0.3: SP 0.3.* May 1918 Axeman, June 1918 to Aug. 1922 Rodman, Aug.-Sept. 1922 Masonry Inspector, and Oct. 1922-Sept. 1926 Instrumentman, Constr. Dept., Chesapeake & Ohio Ry. Co. *TT 8.5: SP 8.5: RC 4.* Oct. 1926 to date Instrumentman, Chesapeake & Hocking Ry. Co. *TT 0.3: SP 0.3: RC 0.3.* *TT 9.1: SP 9.1: RC 4.3.* Refers to L. B. Allen, R. N. Begien, T. R. Burke, C. W. Johns, R. G. Vawter.

903

(14) **MARVIN, PHILLIP EDWARD**, 2417 State St., Little Rock, Ark. (Age 25. Born New Castle, N. H.) Registered Licensed Civ. Engr., State of Arkansas. April to July 1919 Rodman, July to Dec. 1919 Inspector, asphalt street paving, Dec. 1919 to April 1920 Surveyman, and April to July 1920 Asphalt Plant Inspector, all for New Hampshire Highway Dept. *TT 1.3: SP 1.3.* July 1920 to Feb. 1921 with U. S. Army Engr. Corps, until Sept. 1920 as Asst. Levee Inspector at New Madrid, Mo., then Levee Inspector, successively on Oldtown Loop, Oldtown Bend, Ark., and on repairs to Mississippi River Levee, Henrico Landing, Laconia Circle, Ark. *TT 0.6: SP 0.6.* April 1921 to date with Warren Bros. Co., engaged as follows: April to Dec. 1921 and June-Dec. 1922 Res. Inspector in charge of Warrenite bitulithic asphalt paving construction in various cities; Dec. 1921 to June 1922 Laboratory Asst. on experimental work; since Jan. 1923 (except 10 days in Jan. 1924 Inspector on asphalt paving,

Van Trump Testing Laboratory) Field Engr. in charge of Warrenite bitulthic construction in Arkansas, including Harvard Park Experimental Road; also (1926) on asbestophalt paving. *TT 6: SP 1.8: P 4.2: RC 2.1: D 2.6. TT 8: SP 3.8: P 4.2: RC 2.1: D 2.6.* Refers to H. R. Carter, G. D. Douglass, W. E. Ford, A. E. Heagler, D. A. MacCrea, I. Van Trump.

904

(9) **MATTHEWS, JOHN HORACE**, Purdue Univ., School of Civ. Eng., West Lafayette, Ind. (Age 24. Born Tipton, Ind.) 1925 B. S. C. E., Purdue Univ. *TT 2: SP 2.* June 1925 to Sept. 1926 Jun. Engr., Illinois Div. of Highways, Dist. Office, Paris, Ill., acting as Draftsman. *TT 1.2: SP 1.2.* Sept. 1926 to date Instructor in Civ. Eng., Purdue Univ., teaching stresses in simple structures and assisting in bridge and building design and elementary structures. *TT 0.8: P 0.8: RC 0.8. TT 4: SP 3.2: P 0.8: RC 0.8.* Refers to C. B. Benson, E. L. Eriksen, C. A. Hart, W. K. Hatt, W. A. Knapp.

905

(1) **MATULLO, SILVIO EUGENE**, 77 Mt. Prospect Ave., Newark, N. J. (Age 22. Born Newark, N. J.) 1927 C. E., Rens. Pol. Inst. One Summer Rodman for E. R. Halsey, C. E., Newark, N. J. One summer Transitman, Delaware & Hudson R. R. *TT 2: SP 2.* Refers to E. R. Cary, L. W. Clark, T. R. Lawson, P. C. Ricketts, W. W. Rousseau.

906

(1) **MEISENHEIMER, ROBERT AARON**, 110 Hamilton Ave., New Brighton, N. Y. (Age 24. Born Hlawatha, Kans.) 1926 B. S., Univ. of Kans. *TT 2: SP 2.* July 1926 to date Materials Tester, U. S. Gypsum Co., on laboratory work, making reports, etc. *TT 0.9: SP 0.9. TT 2.9: SP 2.9.* Refers to W. C. McNow, H. A. Rice.

907

(1) **MEJIA, ELIAS**, Pereira, Caldas, Colombia, via Buenaventura. (Age 25. Born Pereira, Colombia.) 1927 B. S. in C. E., Ga. School Tech. *TT 2: SP 2.* Refers to R. P. Black, F. C. Snow.

908

(1) **MERRITT, MALCOLM INNIS**, P. O. Box 45, Port Chester, N. Y. (Age 43. Born Pembewick, Conn.) 1903 to 1905 Transitman, Draftsman and Asst. Engr. with Wm. A. Sperry, New Haven, Conn., on surveys, railway layout and design, bridge and wall construction. *TT 2: SP 1: P 1: RC 1: D 0.5.* 1905 to 1908 Asst. Engr. with S. E. Miner, Greenwich, Conn., on surveys, road, bridge and sewer construction and design. *TT 3: P 3: RC 3.* 1908 to 1911 Engr. in charge of estimating and construction, on brick pavement, several miles of water pipe and a large sewer, with John O. Merritt Co., Inc., Port Chester, N. Y. *TT 3: P 3: RC 3.* 1911 to date Chf. Constr. Engr. and Treas., Daly & Merritt, Inc., Port Chester; firm constructed several large sewer plants for Village, including 2 tunnels (2 500 ft. long), built several miles of road, concrete dam on Bryam River, and tunnel and water-supply system for village of Ellenville, N. Y. *TT 16: P 16: RC 16. TT 24: SP 1: P 23: RC 23: D 0.5.* Refers to T. A. Avery, C. MacDonald, S. E. Mino, C. H. Sells, C. A. Studwell, C. A. Young.

909

(15) **METZ, LOUIS ARTHUR**, 705 Construction Industries Bldg., Dallas, Tex. (Age 26. Born Omaha, Nebr.) 1923 B. S., Mass. Inst. Tech. 1924 M. S., Univ. of Wis. *TT 2: SP 2.* Sept. 1923 to June 1924 graduate student, Univ. of Wisconsin. *TT 0.8: P 0.8.* Jan. to Sept. 1918 Draftsman and June 1924 to date Designer and Estimator, and (1 year) Mgr. at Dallas, Tex., with Concrete Eng. Co., Omaha, Nebr. *TT 3.5: SP 0.6: P 2.9: RC 1. TT 6.3: SP 2.6: P 3.7: RC 1.* Refers to R. E. Edgecomb, H. D. Jolley, C. L. Meyer, C. M. Spofford, F. E. Turneure, E. O. Walker.

910

(1) **MIANULLI, GENNARO**, 4718 Eleventh Ave., Brooklyn, N. Y. (Age 27. Born Brooklyn, N. Y.) 1924 C. E. in Arch., Royal Superior Tech. Inst., Milan, Italy. June 1924 to 1927 with Calabro Senano Constr. Co. in Italy, on railroad construction (a few months) and with various contractors in the United States, on steel erection, foundations, etc. March 1927 to date graduate student in research work, Rensselaer Polytechnic Inst. *TT 2: SP 2.* Refers to T. R. Lawson, P. C. Ricketts.

911

(9) **MILLER, LEROY GLICK**, 477 East Mound St., Columbus, Ohio. (Age 24. Born Columbus, Ohio.) 1924 B. S., Capital Univ., Columbus, Ohio. 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to J. B. Babcock, 3d, H. K. Barrows, C. M. Spofford.

912

(14) **MILLER, LLOYD WILLIAM**, 1142 North Thirty-Sixth St., Kansas City, Kans. Graduating student awarded Kansas State Section prize. (Age 22. Born Kansas City, Kans.) 1927 B. S. in C. E., Univ. of Kans. *TT 2: SP 2.* Refers to E. Boyce, F. M. Dawson, W. C. McNow, H. A. Rice, F. A. Russell.

913

(15) **MOORE, WALTER PARKER**, 1310 Fairview Ave., Houston, Tex. (Age 23. Born Hillsboro, Tex.) 1927 B. S. in C. E., Rice Inst. Feb. 1923 to Sept. 1926 Jun. Engr., The Texas Co., acting as Draftsman on oil-refinery construction. *TT 2: SP 2.* Refers to R. J. Cummins, J. M. Howe, L. B. Ryon, Jr.

914

(1) **MORGAN, FREDERICK STEWART**, 164 Twenty-third St., Jackson Heights, New York City. (Age 22. Born Vancouver, B. C., Canada.) 1925 B. A. Sc., Univ. of British Columbia. *TT 2: SP 2.* Summer 1922 Chainman and Rodman, Provincial Govt. of British Columbia. Summer 1923 Chainman, Rodman, etc., and Summer 1924 Asst. Chf. and Chf. of Party on water-works survey, City of Vancouver. June to Sept. 1925 Asst. Chf. of Party, Leveler, Draftsman, etc., British Columbia Elec. Ry. Co., on hydro-electric investigation. *TT 0.3: SP 0.3.* Sept. 1925 to March 1927 Transitman, Leveler, Inspector on field work, Sydney E. Jenkins Co., Engrs. and Constructors, also Draftsman on steel, timber framing, reinforced concrete and bending diagrams, Associate Designer on steam heating system on pier for Canadian Pacific Ry. Trans-Pacific Liners. *TT 1.5: P 1.5: D 0.4. TT 3.8: SP 2.3: P 1.5: D 0.4.* Refers to W. E. Duckering, A. W. Earl, E. G. Matheson, S. B. Nevius, A. D. Wilder.

915

(8) **MORTON, WILLIAM STANTON**, Care, Hotel Windmere, Chicago, Ill. (Age 39. Born New Berne, N. C.) Licensed Engr., State of North Carolina. 1906 to 1920 from Chainman to Res. Engr. on railroad, municipal and highway engineering projects. *TT 15: SP 6: P 9: RC 7.* Aug. 1920 to Jan. 1924 Draftsman and Asst. on Engr. Corps, Chicago & Eastern Illinois R. R.; assisted on design of new yard and freight terminal, Evansville, Ind., and on design of revision of yard at Dolton, Ill., computed construction period for reproducing the railroad for valuation; made preliminary survey and estimate for grade separation at Chicago Heights, Ill., several investigations for deflections in turn-tables, etc. *TT 3.4: P 3.4: RC 3.4.* Jan. to Sept. 1924 in private practice at Chicago, principally on surveys, layouts for buildings and real-estate subdivisions. *TT 0.7: P 0.7: RC 0.7.* Sept. 1924 to March 1925 Instrumentman, Illinois Central R. R., being Chf. of Party on relocation survey in Iowa, including layout of new yard at Waterloo, Ia., and in Locating Engr.'s office, assisting on plans and estimates for new works. *TT 0.5: P 0.5: RC 0.5.* March 1925 to Aug. 1926 with Chicago & Western Indiana R. R. on track elevation project, until May 1925 as Crf. of Party on surveys, then Asst. Engr. in charge of field parties on surveys and track layouts and (after May 1926) of construction of new elevated freight yard, including three concrete subways at South Chicago. *TT 1.5: P 1.5: RC 1.5.* Aug. 1926 to date Engr.-in-Chg., Pennsylvania R. R., in direct charge of field work, including grading, track work, subway (steel and concrete), yard construction, etc., for track elevation (\$600 000) in Chicago. *TT 0.5: P 0.5: RC 0.5. TT 21.6: SP 6: P 15.6: RC 10.2: D 3.4.* Refers to W. A. Christian, O. Froseth, E. H. Lee, C. A. Morse, C. J. Noland, E. E. Stetson, V. R. Walling.

916

(1) **MULLIN, JEROME ALEXANDER**, Slisson Terrace, Tenafly, N. J. (Age 36. Born New York City.) 4 years student, Cooper Union. Dec. 1907 to June 1908 Draftsman, Thompson-Starrett Co., detailing structural steelwork. *TT 0.6: SP 0.6.* June 1908 to June 1909 with Hennebique Constr. Co., as Draftsman detailing concrete buildings (about 5 months) and Timekeeper. *TT 1: SP 1.* June 1909 to March 1910 Draftsman, Alberger Pump Co., detailing centrifugal pump and steam turbines. *TT 0.8: SP 0.8.* March 1910 to date with Raymond Concrete Pile Co., as Draftsman, Asst. Engr. and Designing Engr. detailing, designing, estimating and preparing reports on foundations, bridges, piers, terminals, shipways and steel mills. *TT 17: SP 2: P 15: RC 10: D 15. TT 19.4: SP 4.4: P 15: RC 10: D 15.* Refers to W. A. Back, J. J. Collins, H. P. Hamlin, H. A. C. Hellyer, J. H. Quimby, J. W. Taussig, M. M. Upson.

917

(10) **MURPHREE, SAMUEL BARROW**, Box 447, Tallassee, Ala. (Age 24. Born Troy, Ala.) 1927 B. S. in C. E., Ala. Pol. Inst. Summer 1925 Instrumentman and Concrete Inspector, City of Troy, Ala. Summer 1926 Foreman with F. B. Sellers, Contr., in charge of squad building concrete culverts. May 1927 to date Concrete Inspector in Concrete Testing Laboratory, Dixie Constr. Co., on work at Tallassee, Ala. *TT 2: SP 2.* Refers to C. A. Baughman, J. A. C. Callan.

918

(10) **NAPIER, LEROY MUNROE, Jr.**, 202 South West Tenth Ave., Miami, Fla. (Age 24. Born Forsyth, Ga.) 1927 B. S. C. E., Ga. School Tech. *TT 2: SP 2.* Sept. 1924 to July 1925 Rodman and Transitman, Dept. of Streets, Miami, Fla. *TT 0.8: SP 0.8. TT 2.8: SP 2.8.* Refers to R. P. Black, F. C. Snow.

919

(13) **NEUDATCHIN, IVAN MANUELOVICH**, 1691 Ward St., Berkeley, Cal. (Age 33. Born Petrograd, Russia.) 1917 C. E., Petrograd Pol. Inst. 1927 M. S. in Irrigation, Univ. of Cal. *TT 2: SP 2.* June 1917 to March 1918 Engr. in charge of investigation of rivers, Dept. of Waterways of the Interior, at Blagoveshensk, Siberia, Ministry of Ways of Communications. *TT 0.6: P 0.6: RC 0.4: D 0.3.* April to July 1918 Engr., Dept. of Labor, Primorskaya Dist. Management, in charge of railroad survey in valley of River Amba, near Vladivostok. *TT 0.3: P 0.3: RC 0.2: D 0.1.* July 1918 to April 1919 Mgr., Tech. Dept., Vladivostok Technical Cooperative Co. *TT 0.8: P 0.8: RC 0.3: D 0.5.* Oct. 1919 to Feb. 1923 Asst. to Chf. Engr., Chinese Eastern R. R. Co., Harbin, Manchuria, on improvement of Mostovoy Settlement and on regulation of River Sungary. Oct. 1919 to May 1920 also Instructor, Manchurian Tech. School, Harbin. *TT 3.4: P 3.4: RC 0.3: D 0.4.* March to Nov. 1923 Draftsman and Designer with Fr. Whitton, Constr. Mgr., San Francisco, Cal. *TT 0.7: P 0.7: D 0.2.* Nov. 1923 to Sept. 1924 Draftsman with J. Miller and T. Pfueger, Archts., San Francisco. *TT 0.8: SP 0.5: P 0.3: D 0.2.* Dec. 1924 to Aug. 1926 Draftsman and Designer for Ch. Masten, L. Hurd and Th. Chace, Archts. and Engrs., and (after Dec. 1925) for H. Brunnier and M. Couchot, Cons. Engrs., San Francisco, and others. *TT 1.7: SP 0.6: P 1.1: D 0.6.* Aug. 1926 to date Designer, California Corrugated Culvert Co., Berkeley, Cal. *TT 0.7: P 0.7: D 0.7.* *TT 11: SP 3.1: P 7.9: RC 3.9: D 3.* Refers to R. E. Davis, B. A. Etcheverry, S. T. Harding, L. H. Nishkian, A. C. Norton.

920

(1) **NEVE, HENRY LINN**, 2610 Glenwood Rd., Brooklyn, N. Y. (Age 25. Born Kokomo, Colo.) 1923 B. S. in C. E., Colo. Univ. *TT 2: SP 2.* June to Aug. 1923 Structural Draftsman, Producers & Refiners Oil Co., Denver, Colo., tracing and drafting. *TT 0.1: SP 0.1.* Aug.-Oct. 1923 Instrumentman, Wyoming State Highway Dept. Cheyenne, Wyo., acting as Levelman and Transitman. *TT 0.2: SP 0.2.* Nov. 1923 to April 1924 Draftsman, Denver Municipal Water Co. *TT 0.4: SP 0.4.* April 1924 to May 1925 Asst. Engr., Continental Oil Co., Glenrock, Wyo., on design and superintending construction. *TT 1.1: P 1.1: RC 1.1.* July 1925 to April 1926 Structural Draftsman, Great Western Sugar Co., Denver, on design and drawing of steel framework for factory buildings. *TT 0.9: SP 0.5: P 0.4: D 0.4.* April 1926 to date Structural Draftsman, with Gibbs & Hill, Inc., New York City, on design and drawing of structural steel buildings. *TT 1: SP 0.5: P 0.5: D 0.5.* *TT 5.7: SP 3.7: P 2: RC 1.1: D 0.9.* Refers to F. R. Dungan, C. C. Kohlheyer, E. P. Quirk.

921

(1) **NICHOLS, NORMAN DYER**, 21 West Ft. Lee Rd., Bogota, N. J. (Age 26. Born New York City.) 1924 B. S. in C. E., Norwich Univ. *TT 2: SP 2.* Sept. 1924 to July 1925 Instrumentman and Inspector, New York Central R. R., on grade revision. *TT 0.9: P 0.9.* July 1925 to date Asst. to Engr. of Tests, U. S. Gypsum Co., New York City, 1 year as Jun. Engr. on plant construction at Staten Island, N. Y. *TT 1.8: P 1.8.* *TT 4.7: SP 2: P 2.7.* Refers to E. W. Chamberlin, W. J. Krefeld, A. E. Winslow.

922

(1) **NIELSEN, ROY TRYGGVE**, 270 Oak St., Perth Amboy, N. J. (Age 22. Born Brooklyn, N. Y.) 1927 B. S. in C. E., Cooper Union Night School. May 1924 to date with Larson & Fox, Civ. Engrs., Perth Amboy, N. J., successively as Rodman, Chainman, Instrumentman and Chf. of Survey Party. *TT 3.2: SP 3: P 0.2: RC 0.2.* Refers to F. E. Foss, M. F. Larson, G. Morrison, J. P. J. Williams.

923

(1) **NONES, ADOLFO**, Box 284, Ponce, Porto Rico. (Age 48. Born Arecibo, Porto Rico.) 1899 Sc. D., Univ. Central de Venezuela, Escuela Nacional de Ingenieria. *TT 2: SP 2.* 1900 to 1911 Prof., Escuela Nacional de Ingenieria, Caracas, Venezuela; also Chf. Engr. on installment of Coast Guard Artillery of Venezuela and repair of national defences (1904 to 1905), on San Joaquin Aqueduct (1905 to 1906), on Avenida Puente Suevo, Caracas (1908 to 1909) and for construction of cold-storage building (1000 ton), Venezuela Meat & Products Syndicate, Puerto Cabello (1909 to 1912); work for national Govt. on aqueduct for Caracas Water Supply (1906), and Director of Public Works (Mun. Engr.), Caracas (1909). *TT 12: P 12: RC 12: D 0.8.* 1912 to date (except 1917 to 1920 Mgr., Central Rufina, Guayanilla) in private practice; work included designs of school house, city hall, sewerage, and aqueduct at Vega Baja, school house and aqueduct at San Lorenzo, design and construction of reinforced concrete school house at Ponce, reinforced concrete pier, Central Rufina, Guayanilla, and construction of private houses (about \$200 000) and city hall, Guayama, Porto Rico. *TT 15: P 15: RC 15: D 2. TT 29: SP 2: P 27: RC 27: D 2.8.* Refers to M. V. Domenech, R. A. Gonzalez, J. M. Ibarra Cerczo, A. S. Lucchetti-Otero, E. Totti y Torres, C. del Valle Zeno.

924

(5) **NORRIS, MILTON SADTLER**, 2129 North Charles St., Baltimore, Md. (Age 27. Born Baltimore, Md.) 1926 diploma in Civ. Eng., International Correspondence School. Certificate in Reinforced Concrete Design, John Hopkins Univ. July 1918 to Oct. 1922 Constr. Inspector, Maryland State Roads Comm., Baltimore, Md., laying out and inspecting construction of highways and bridges. *TT* 4.3: *SP* 4.3. Oct. 1922 to Oct. 1923 Asst. Supt., F. A. Denison Co., Washington, D. C., supervising construction of highways and bridges, estimating, etc. *TT* 1: *P* 1: *RC* 1. Oct. 1923 to date Rodman, Baltimore & Ohio R. R. Co., Baltimore, Md., inspecting materials and workmanship on construction of large buildings. *TT* 3.5: *SP* 3.5. *TT* 8.8: *SP* 7.8: *P* 1: *RC* 1. Refers to E. J. Dougherty, L. A. Hauser, H. A. Lane, M. A. Long, R. Mather.

925

(1) **NOURSE, WYNNE ROGERS**, 65 South Portland Ave., Brooklyn, N. Y. (Age 27. Born New Orleans, La.) Oct. 1916 to April 1919 student at Tulane Univ. and Virginia Military Inst. *TT* 1: *SP* 1. Aug. 1919 to June 1920 Instrumentman St. Tammany Parish Highway Comm., Corington, La., and (after March 1920) Louisiana State Highway Dept. *TT* 0.7: *SP* 0.7. June to Aug. 1920 Instrumentman and Asst. Engr., Kirby Lumber Co., Kirbyville, Tex., on railroad location and construction. *TT* 0.2: *SP* 0.2. Oct. 1920 to April 1921 Instrumentman on railroad location surveys, Vaccaro Bros. & Co. (Standard Fruit & Steamship Co.), New Orleans, La. *TT* 0.5: *SP* 0.5. May to Oct. 1921 Instrumentman, J. W. Billingsley & Co., New Orleans, on highway location survey. *TT* 0.5: *P* 0.5. Nov. 1921 to April 1922 Instrumentman and Chf. of Party on highway location and construction, Louisiana State Highway Comm., Baton Rouge, La. *TT* 0.5: *SP* 0.2: *P* 0.3. June 1922 to Nov. 1923 Instrumentman and Chf. of Party on surveys and subdivision work with Southern Eng. Co., Clarksdale, Miss., and (after Oct. 1922) City Surveyor, New Orleans. *TT* 1.4: *SP* 0.3: *P* 1.1: *RC* 0.4. Nov. 1923 to Dec. 1924 Asst. Engr., being Chf. of Party on railroad relocation and farm survey work, and Office Engr., Standard Fruit & Steamship Co., New Orleans. *TT* 1.1: *P* 1.1: *RC* 0.8. May 1925 to April 1926 Engr.-in-Chg. on building construction and pile-driver work, with Theo. O. Hotard, Contr., New Orleans. *TT* 0.8: *P* 0.8. April to July 1926 Chf. of Party with Joseph Pugh, Parish Surveyor, Mandeville, La. *TT* 0.3: *P* 0.3: *RC* 0.3. Nov. 1926 to April 1927 Instrumentman, Raymond Concrete Pile Co., Slidell, La., also assisted on computations and estimates. *TT* 0.3: *SP* 0.3. *TT* 7.5: *SP* 3.4: *P* 4.1: *RC* 1.5. Refers to J. B. Converse, C. M. Kerr, L. E. Loxley, R. H. Mann, J. Pugh.

926

(1) **NOVAK, CHARLES EDWARD**, 1278 East Twenty-Seventh St., Brooklyn, N. Y. (Age 24. Born Budapest, Hungary.) May 1921 to Dec. 1924 Trigonometric Computer and Draftsman, Survey Dept., Title Guarantee & Trust Co., New York City. *TT* 3.5: *SP* 2.8: *P* 0.7: *RC* 0.7. 1925 Rodman, Dept. of Public Works, Borough of Manhattan, N. Y., acting as Transmittan, part of time in charge. *TT* 1: *P* 1. Jan. 1926 to date Jun. Engr., Board of Transportation, New York City, acting as Chf. of field party on subway construction, laying out work and supervising construction. *TT* 1.5: *P* 1.5: *RC* 1.5. *TT* 6: *SP* 2.8: *P* 3.2: *RC* 2.2. Refers to H. J. Alexander, E. S. Blech, J. J. Durfee, C. Goodman, H. A. Hyman, I. J. Stander.

927

(7) **O'CONNOR, JOHN BROWN**, 333 North Grinnell St., Jackson, Mich. (Age 26. Born Deckerville, Mich.) 1926 B. S. in Civ. Eng., Univ. of Mich. *TT* 2: *SP* 2. Feb. 1922 to April 1923 Appraisal Engr., Detroit City Gas Co., investigation and appraisal of buildings and equipment. *TT* 1.2: *P* 1.2. April to Sept. 1923 and June to Sept. 1924 Asst. Hydr. Engr., Cole Pitometer Co., New York City, on city water waste survey. *TT* 0.5: *P* 0.5. Sept. 1923 to June 1924 (part of time) Asst. Constr. Engr., Univ. of Mich. Bldg. Comm., on building construction. Feb. to Sept. 1925 Petroleum Engr., Amerada Petroleum Corporation, Tulsa, Okla., oil field construction and geological survey. *TT* 0.7: *P* 0.7. June 1926 to Feb. 1927 Constr. Engr., Detroit City Gas Co., on design of buildings and equipment. *TT* 0.7: *P* 0.7: *D* 0.7. Feb. 1927 to date Draftsman, Commonwealth Power Corporation, Jackson, Mich., on construction design. *TT* 0.2: *P* 0.2: *D* 0.2. *TT* 5.3: *SP* 2: *P* 3.3: *D* 0.9. Refers to F. B. Kiel, E. Maerker, A. Streiff, W. W. Tefft, N. Van Eenam.

928

(10) **ODOM, JAMES JULIUS**, 520 North Twenty-Fifth St., Birmingham, Ala. (Age 22. Born Birmingham, Ala.) 1927 B. S. in C. E., Ala. Pol. Inst. *TT* 2: *SP* 2. Refers to C. A. Baughman, J. A. C. Callan.

929

(7) **OLIVER, FRANK GILLESPIE**, 2007 East Ninth St., Des Moines, Iowa. (Age 21. Born Oklahoma City, Okla.) 1927 B. S., Iowa State Coll. *TT* 2: *SP* 2. Refers to T. R. Age, R. A. Caughey, W. L. Foster, A. H. Fuller, J. H. Griffith.

930

(15) **ORR, CHARLES SEAY**, Care, Marland Pipe Line Co., Borger, Tex. (Age 23. Born Winfield, Kans.) 1927 B. S. in C. E., Univ. of Kans. *TT 2: SP 2*. Feb. 1927 to date Engr., Marland Pipe Line Co. *TT 0.3: SP 0.3. TT 2.3: SP 2.3*. Refers to E. Boyce, M. S. Retchum, W. C. McNown, H. A. Rice, F. A. Russell.

931

(3) **ORR, HAROLD RIPLEY**, 115 Sixth Ave. North, Troy, N. Y. (Age 25. Born Rupert, Vt.) 1924 B. S. in C. E., Norwich Univ., Northfield, Vt. *TT 2: SP 2*. June 1924 to March 1926 with Springfield (Mass.) Water Works, as follows: June to Dec. 1924 Inspector, Dec. 1924 to April 1925 Computer, and April to Nov. 1925 Tester of cement, concrete sand and gravel, and filter sand, stone and gravel and Inspector on placing of filter sand and gravel, all in connection with filter plant construction; after Nov. 1925 Instrumentman, Note-Computer and Plotter, survey for new storage reservoir. *TT 1.7: SP 1.7*. March 1926 to May 1927 with Standard Oil Co. of New York, Troy, N. Y., until Jan. 1927 as Constr. Cost Accountant, service station construction, then Clerk. *TT 0.3: SP 0.8*. May 1927 to date Inspector, concrete dam construction, with G. Saxton Thompson, Cons. Engr., Troy. *TT 0.1: SP 0.1. TT 4.6: SP 4.6*. Refers to H. H. Hatch, B. M. Stark, G. S. Thompson, A. E. Winslow.

932

(13) **ORSELLI, ALFRED JOSEPH**, 1627 Filbert St., San Francisco, Cal. Graduating student awarded San Francisco Section prize. (Age 21. Born San Francisco, Cal.) 1927 B. S., Univ. of Cal. Summers 1923-1926 Chairman, Transitman, etc., Land Dept., Pacific Gas & Elec. Co. *TT 2: SP 2*. Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, S. T. Harding, C. G. Hyde.

933

(13) **OWENS, REUBEN HIRST**, 1457 Balboa Ave., Burlingame, Cal. (Age 29. Born Dublin, Ireland.) 1923 B. A. I. and B. A., Trinity Coll., Dublin (Ireland) Univ. *TT 2: SP 2*. April to July 1923 student, London & North Eastern Ry. Co., London, England. *TT 0.3: SP 0.3*. Sept. to Oct. 1923 Plant Asst., Petroleum Dehydrating Co., Long Beach, Cal. *TT 0.1: SP 0.1*. Oct. 1923 to March 1924 Draftsman with Allin Bros., Civ. Engrs., Pasadena, Cal. *TT 0.3: SP 0.3*. March 1924 to Sept. 1925 Office Engr., Title Guarantee & Trust Co., Los Angeles, Cal., computing, drafting, subdivision layouts, title investigations. *TT 1.5: SP 1.5*. Sept. 1925 to Nov. 1926 Asst. Res. Engr. with C. C. Kennedy, San Francisco, Cal., on street improvement, sewer system and installation town survey, Duns-muir, Cal. *TT 1.3: P 1.3: RC 1*. Nov. 1926 to date Eng. Draftsman, City of San Francisco. *TT 0.5: P 0.5. TT 6: SP 4.2: P 1.8: RC 1*. Refers to T. D. Allin, C. C. Kennedy, E. A. Ingham, M. M. O'Shaughnessy, E. N. Prouty, H. J. Stahle.

934

(2) **PADILLA, BENEDICTO BIBBY**, Mass. Inst. Tech., Cambridge, Mass. (Age 26. Born Manila, Philippine Islands.) A. B., Atenco de Manila. LL.B., Univ. of Philippines. 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2*. Refers to H. K. Barrows, W. M. Fife, G. L. Hosmer, E. Mirabelli, C. M. Spofford.

935

(11) **PARSONS, FRANCIS WAYLAND**, 330 West Maple St., Glendale, Cal. (Age 43. Born Glenwood, Iowa.) 1908 B. C. E., Iowa State Coll. *TT 2: SP 2*. Sept. 1908 to March 1909 Rodman and Instrumentman, Boston Consolidated Mining Co., Bingham Canyon, Utah. *TT 0.6: SP 0.6*. March to Aug. 1909 Asst. Engr., Salt Lake & Ogden Ry. Co., being Inspector on electric installation. *TT 0.4: SP 0.4*. Aug. 1909 to April 1910 Instrumentman, Eng. Dept., Salt Lake City, Utah. *TT 0.7: SP 0.7*. Sept. 1911 to March 1914 Draftsman and later Asst. Engr., Southern California Gas Co., Los Angeles, Cal., drafting, laying out, staking, designing and estimating gas-main systems for subdivisions and towns, in charge of engineering work for Riverside Div. *TT 2.5: SP 0.5: P 2: RC 2*. April 1914 to Dec. 1918 Draftsman, on street and sewer work for Eng. Dept., Los Angeles, and (after July 1918) on mapwork, Los Angeles County Surveyor's Office. *TT 4.6: SP 4.6*. Dec. 1918 to July 1919 Asst. Engr., Board of Public Utilities, Los Angeles, investigations and tests on gas and electricity, etc. *TT 0.6: P 0.6: RC 0.6*. July 1919 to date Draftsman and (since 1923) Asst. Engr., City Engr.'s Dept., Los Angeles, on sewer design, in charge of sub-structure work, design and layout of sewer for big districts, design of sewage pumping plants, and preliminary design of sewer interceptor and in charge of sewer design for San Fernando Valley. *TT 8: P 8: RC 5: D 3. TT 19.4: SP 8.8: P 10.6: RC 7.6: D 3*. Refers to M. Butler, J. W. Cleland, E. Z. Collings, W. T. Knowlton, H. Z. Osborne, R. H. Rook, H. A. Van Norman.

936

(10) **PARSONS, GERALD ERNEST**, Box 151, Opa Locka, Fla. (Age 23. Born Cumberland, Md.) 1926 B. S. C. E., W. Va. Univ. *TT 2: SP 2*. Summer 1920 Rodman, summer 1921 Chainman, Summer 1923 Instrumentman, and Summer 1924 Instrumentman and Draftsman with Kanawha County Road Engr., Charleston, W. Va. Summer 1922 Chainman and summer 1925 Draftsman, West Virginia State Road Comm. June to Dec. 1926 Field Engr., Keeley Constr. Co., Clarksburg, W. Va., on highway construction. *TT 0.5: P 0.5: RC 0.5*. Dec. 1926 to date Draftsman and Designer, Opa Locka (Fla.) Co., Inc., on drainage, development, highway and municipal engineering. *TT 0.5: P 0.5: RC 0.5 TT 3: SP 2: P 1: RC 1*. Refers to W. Brewster, R. P. Davis, P. J. Walsh.

937

(1) **PASQUALINO, PHILIP PAUL**, 245 East Fifty-First St., New York City. (Age 21. Born Sicily, Italy.) 1927 B. S. in Civ. and Structural Eng., Tufts Coll. Summer 1923 Asst. Timekeeper, Wakefield (Mass.) Water Dept., laid pipe, etc. Summer 1924 on highway work for Town of Wakefield. Summer 1925 with Wakefield Municipal Gas Dept. laying pipe and service connections to homes. Summer 1926 leveling on foundations, for new Parker House for Fuller Constr. Co., and on new Motor Mart in Boston; in charge of grading and reclaiming swamp for new Tufts Coll. Stadium in Medford, Mass. *TT 2: SP 2*. Refers to J. B. Babcock, 3d, H. P. Burden, R. W. Lefavour, W. C. Voss, F. N. Weaver, E. H. Wright.

938

(11) **PECK, RALPH EMERSON**, 401 South Lincoln St., Denver, Colo. (Age 22. Born Ordway, Colo.) 1927 B. S. in C. E., Univ. of Colo. *TT 2: SP 2*. Refers to F. R. Dungan, C. L. Eckel, H. J. Gilkey.

939

(2) **PETERSEN, RANDOLPH JOSEPH**, 888 Massachusetts Ave., Cambridge, Mass. (Age 24. Born Washington, D. C.) 1927 S. B., Mass. Inst. Tech. *TT 2: SP 2*. Refers to J. B. Babcock, 3d, C. B. Breed, C. M. Spofford.

940

(4) **PIDCOCK, GEORGE EDWIN**, 529 Hamilton St., Allentown, Pa. (Age 30. Born Bloomsbury, N. J.) Registered Prof. Engr. and Land Surveyor, State of Pennsylvania. 1917 C. E., Lafayette Coll. *TT 2: SP 2*. Summer 1916 Rodman and Draftsman with City Engr., Phillipsburg, N. J. Summer 1917 Asst. to County Engr., Putnam County, W. Va., on road work, design of small bridges, culverts, etc. *TT 0.3: P 0.3: RC 0.2: D 0.1*. Sept. 1917 to Jan. 1920 with Elec. Div., New York Central R. R., until Jan. 1918 as Transitman, M. of W. office, in charge of parties laying out yards, sidings, realigning track, spiraling curves, etc.; then Asst. Supervisor of Track, Sub-Div. A, in responsible charge of track work. *TT 2.2: P 2.2: RC 2.2: D 0.5*. Jan. to June 1920 Draftsman, Tower Iron Works, Providence, R. I., designing fire escapes, stairs, detailing structural steel for mill buildings. *TT 0.5: P 0.5*. June 1920 to Jan. 1921 with Bethlehem (Pa.) Fabricators, Inc., as Detailer of structural steel for mill buildings, hotels, theatres, etc. *TT 0.5: P 0.5: D 0.5*. Jan. 1921 to April 1923 Asst. to City Engr., Allentown, Pa., at times in charge of paving, street grading, storm sewerage and permit work. *TT 2.2: P 2.2: RC 2: D 0.2*. April 1923 to April 1925 with E. S. Kestor & Co., as Estimator and Purchasing Agt. for building construction (30 to 50 houses annually), and had charge of municipal improvement, 1 000-acre subdivisions. May 1924 to date member of firm, Miller & Pidcock, Civ. and Cons. Engrs., and (since Jan. 1926) their successors, G. Edwin Pidcock Co., after April 1925 in charge of field and office work of engineers, draftsmen and rodmen, and estimating and quantity surveying of large projects. Since Jan. 1926 also Pres., Pennsylvania-Florida Constr. Co., and Pres. and Executive Head, Incorporated Constr. Co., installing paving, boulevard lights, water mains, etc. (about \$85 000). *TT 4.3: P 4.3: RC 4.3: D 1.5 TT 12.1: SP 2: P 10.1: RC 8.7: D 2.4*. Refers to H. R. Fehr, F. W. Gilcrease, L. J. H. Grossart, T. H. Moyer, J. M. Porter.

941

(4) **PIERCE, ROBERT GORDON**, 6 South Dod Hall, Princeton, N. J. (Age 23. Born New York City.) 1927 B. S. in Eng., Princeton Univ. Summer 1923 Asst. to Engr., James Stewart & Co., taking and plotting cross-sections on Genesee River, Rochester, N. Y. Summer 1926 Draftsman and Inspector, with Moran, Maurice & Proctor, assisting on design of foundations and inspecting work. *TT 2: SP 2*. Refers to G. E. Beggs, F. H. Constant.

942

(13) **POPE, LEMUEL**, 3d, 6336 Fulton St., San Francisco, Cal. (Age 30. Born Portsmouth, N. H.) 1918 U. S. Mil. Acad., West Point, N. Y. 1921 B. S., Mass. Inst. Tech. *TT 2: SP 2*. Nov. 1918 to Oct. 1920 and Sept. 1921 to Oct. 1922 with U. S. Army until Oct. 1920 as 1st Lieut., Corps of Engrs., Ft. Humphreys, Va., and in France; being Constr. Officer, Coblenz, Germany, from Oct. 1919 to July 1920, and Engr. in charge of construction, Fr. Gardner, Nahant, Mass., from July to Oct. 1920; Sept. 1921 to Oct. 1922 detailed from office of Chf. of Engrs., Wash-

ington, D. C., on work for special engineers of Baltimore & Ohio R. R., making reports of railroad operation. *TT 3: SP 1.5: P 1.5: RC 0.7.* Nov. 1922 to Dec. 1923 Chf. Engr. and Asst. Supt., James Stewart & Co., Inc., New York City, on construction for Lima (Ohio) Locomotive Works and for Standard Oil Co., Cleveland, Ohio. *TT 1.1: P 1.1: RC 0.5.* Jan. 1924 to May 1925 with L. G. Horowitz Co., Passaic, N. J., as Chf. Engr. and Gen. Supt. on small jobs (up to \$150 000). *TT 1.4: P 1.4: RC 1.2: D 0.2.* June to Aug. 1925 Engr. and Estimator, McGinty Constr. Co., Phoenix, Ariz. *TT 0.2: P 0.2.* Aug. 1925 to May 1926 Engr. and Constr. Supt. with A. C. MacArthur, Archt., Phoenix, Ariz. *TT 0.6: P 0.6: RC 0.5: D 0.3.* June to July 1926 Asst. Engr., Great Western Power Co., San Francisco, Cal. *TT 0.1: P 0.1: RC 0.1.* July to Sept. 1926 Mechanic, placing reinforcing steel, and Sept. 1926 to date Engr., Edw. L. Soule Co., San Francisco. *TT 0.8: P 0.8: RC 0.4: D 0.1.* *TT 9.4: SP 3.6: P 5.8: RC 3.5: D 0.6.* Refers to T. Bloecher, Jr., S. F. Jones, M. M. Murtaugh, G. E. Russell, E. L. Soule, C. M. Spofford, G. A. Youngberg.

943

(13) **POPPE, CHARLES RAYMOND**, 557 Lake St., Reno, Nev. (Age 22. Born Sacramento, Cal.) 1927 B. S. in C. E., Univ. of Nev. *TT 2: SP 2.* Refers to F. L. Bixby, H. P. Boardman, F. H. Sibley.

944

(1) **POPPER, MAX JOSEPH**, 1685 Bryant Ave., New York City. (Age 26. Born Philadelphia, Pa.) 1923 B. S. M. E., N. Y. Univ. 1927 B. S. C. E., Cooper Union (Evening). *TT 2: SP 2.* 1923 to 1925 research and maintenance engineering, American Brass Co., at Hastings-on-Hudson Branch. *TT 2: SP 2: D 2.* 1925 to date Structural Designer, Board of Transportation of New York on sump and pump chamber and sewer design and layout, also track drainage. *TT 2: SP 2: D 2.* *TT 6: SP 6: D 4.* Refers to F. E. Foss, G. Morrison, A. I. Ralsman.

945

(14) **PORTER, WALDO JUSTIN BICKLE**, Ainsworth, Nebr. (Age 32. Born Crawford, Nebr.) 1916 B. S. in C. E., Iowa State Coll. *TT 2: SP 2.* June–Nov. 1916 Draftsman, Kansas City (Kans.) Structural Steel Co., detailing steel mill buildings. *TT 0.5: SP 0.5.* Dec. 1916 to May 1917 Draftsman with Von Unwerth & Wilson, Cons. and Architectural Engrs., Kansas City, Mo., on concrete and steel working drawings for mill and office buildings. *TT 0.4: SP 0.4.* May 1917 to July 1919 U. S. Army, as enlisted man, 314th Engrs., and 2d Lieut., Field Artillery; attended Third Officers' Training Camp and Artillery School, Saumur, France, later with 80th Field Artillery, 7th Div. *TT 2.2: SP 2.2.* Aug. 1919 to May 1927 with Nebraska Dept. of Public Works as follows: Aug. 1919 to March 1920 Engr. Draftsman; March to Dec. 1920 Project Engr. in charge of road construction; Dec. 1920 to Jan. 1921 Asst. Div. Engr. in charge of road construction and maintenance; Jan. 1921 to Nov. 1925 Project Engr. in charge of pavement construction and inspection in Douglas County and (after April 1925) of construction of Yutan Bridge across Platte River (twenty-four 50-ft. transverse joist steel girders); since Nov. 1925 Dist. Engr. in charge of maintenance and construction of highways. *TT 7.7: SP 0.6: P 7.1: RC 7.1: D 1.4.* May 1927 to date Engr., American Paving Corporation, Omaha, Nebr. *TT 0.2: P 0.2.* *TT 13: SP 5.7: P 7.1: RC 8.1: D 1.4.* Refers to R. L. Cochran, G. P. Dorsey, C. M. Duff, R. O. Green, W. F. Hart, M. C. Noble, A. L. Ogle.

946

(3) **PROCTOR, EDWARD MOORE**, 36 Toronto St., Toronto, Ont., Canada. (Age 39. Born Sarnia, Ont., Canada.) 1909 B. A. Sc., Univ. of Toronto. *TT 2: SP 2.* Summer 1907 Topographical Recorder and Draftsman, Canadian Pacific Irrigation Dept. Summer 1908 Leveler, National Transcontinental Ry. June to Nov. 1909 Res. Engr. with Willis Chipman, Cons. Engr., Weyburn, Saskatchewan, on municipal water-works construction. *TT 0.5: P 0.5.* Dec. 1909 to Aug. 1912 structural steel drafting on buildings and bridges, Canada Foundry Co., Toronto. *TT 2.7: P 2.7.* Sept. 1912 to Sept. 1916 Structural Designer, Dept. of Bridges, Toronto, on bridges, buildings and special structures. *TT 4: P 4: D 4.* Sept. 1916 to date Gen. Mgr. and at present member of firm, James, Proctor & Redfern, Ltd., Cons. Engrs., Toronto; has had charge of design, supervision of construction, etc. of water-works and sewerage systems, power development, pavements, etc. (\$2 000 000 to \$3 000 000 annually) (some named in application); made numerous designs of industrial buildings, bridges, etc., and reports on water-works at Chatham and grade separation at Kitchener; Member, Board of Engrs. reporting on joint water supply, Essex Border Utilities Comm. *TT 10.4: P 10.4: RC 10.4.* *TT 19.7: SP 2: P 17.7: RC 10.4: D 4.* Refers to E. B. Besselleve, J. H. Fuentes, T. H. Hogg, M. Knowles, C. H. Mitchell, J. M. T. Rice.

947

(15) **RAMSAY, GEORGE CHESTER**, 710 Santa Fe Bldg., Dallas, Tex. (Age 30. Born Springfield, Mo.) 1924 B. S. in C. E., Univ. of Tex. *TT 2: SP 2.* May to July 1918 Engr. Helper, and July to Oct. 1918 and May to Oct. 1919 Rodman and Chainman, Valuation Dept., Interstate Commerce Comm., Kansas City, Mo. *TT 0.8: SP 0.8.* Oct. 1918 to May 1919 with U. S. Army. Oct. to Dec. 1919 Chainman, Bureau of Roads and Bridges, Dept. of Public Works, Nebraska. *TT 0.2: SP 0.2.* Dec. 1919 to Sept. 1921 Chainman and Rodman, and June to Sept. 1922 Concrete Inspector, Missouri, Kansas & Texas R. R., Dallas, Tex. *TT 1.9: SP 1.9.* June to Dec. 1924 Inspector, Memorial Stadium, Austin, Tex. *TT 0.5: SP 0.5.* 1924 to 1925 at Graduate School, Univ. of Texas. *TT 0.5: P 0.5.* June to Nov. 1925 Inspector, and Nov. 1925 to March 1926 Jun. Engr. (Civ.), U. S. Engr. Dept., Harrisburg, Tex., on Houston Ship Channel. *TT 0.7: P 0.7: RC 0.5.* March to May 1926 Quantity Surveyor, and May 1926 to date Local Mgr., Quantity Survey Bureau, Dallas. *TT 1.2: P 1.2: RC 1.* *TT 1.6: P 1.6: SP 5.4: P 2.4: RC 1.5.* Refers to L. W. Balcom, E. C. H. Bantel, A. T. Granger, A. D. Hawley, J. M. Howe, T. U. Taylor.

948

(1) **RANKIN, KARL LOTT**, 309 West 109th St., New York City. (Age 28. Born Manitowoc, Wis.) 1922 C. E., Princeton Univ. *TT 2: SP 2.* Special work at Swiss Federal Polytechnic, Zurich, and at Heidelberg Univ. 1922 to 1925 Constr. Supt., Near East Relief, Caucasus, supervised construction of roads, buildings, power plants, etc., made reports, estimates and let contracts. *TT 2.5: P 2.5: RC 1.* 1925 to date Mgr., Berlant Development Co., Linden, N. J., on design, construction, financing and sale of dwelling houses, construction of sewers, etc. *TT 1.6: P 1.6: RC 1.6.* *TT 6.1: SP 2: P 4.1: RC 2.6.* Refers to G. E. Beggs, W. H. Code, F. H. Constant, R. R. Martel, W. W. Michael, F. Thomas.

949

(8) **RASMUSSEN, HOWARD BURNETT**, 321 North Lorel Ave., Chicago, Ill. Graduating student awarded Central Illinois Section prize. (Age 22. Born Chicago, Ill.) 1927 B. S., Univ. of Ill. *TT 2: SP 2.* Refers to H. E. Babbitt, H. Cross, J. J. Doland, W. C. Huntington, H. H. Jordan, M. S. Ketchum, G. W. Pickels.

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(12) **RATHBUN, VILAS RICHARD**, 311 South 9th St., Tacoma, Wash. (Age 40. Born Midland, Tex.) 1911 B. S. in C. E., Univ. of Wash. *TT 2: SP 2.* June to Aug. 1911 Helper in government timber testing laboratory, Univ. of Washington. *TT 0.2: SP 0.2.* Aug. 1911 to March 1912 Foreman and Engr. for Samuel Hill, Maryhill, Wash., surveying, building concrete structures, irrigation works. *TT 0.5: SP 0.5.* April to Oct. 1912 Draftsman and on inspection, Northern Pacific Ry., Seattle. *TT 0.6: SP 0.6.* Oct. 1912 to March 1913 Engr., Franklin Eng. Co., Seattle, building construction, designing and surveying. *TT 0.4: SP 0.4.* March 1913 to Oct. 1914 Inspector and Draftsman, Port of Seattle, on construction of docks and warehouses, design of grain elevators, docks, etc., in charge of survey party. *TT 1.5: SP 0.5: P 1: RC 1: D 0.4.* Oct. 1914 to Feb. 1916 Bldg. Supt., Franklin Eng. Co., at Seattle, on design and construction. *TT 1.3: P 1.3: RC 1.3: D 0.3.* Feb. 1916 to May 1917 contracting with A. T. Winsor, Seattle, buildings and bridges. *TT 1.3: P 1.3: RC 1.3.* May to Sept. 1917 Designing Draftsman, Pacific Coast Co., Seattle, designs and reports on projects. *TT 0.4: P 0.4: RC 0.4: D 0.4.* Oct. 1917 to Sept. 1919 Structural Engr., Southern Pacific R. R. Co., at San Francisco, Cal., designing and investigating. *TT 2: P 2: RC 2: D 2.* Sept. 1919 to Jan. 1920 Res. Engr., Montana State Highway Dept. *TT 0.3: P 0.3: RC 0.3.* Jan. 1920 to Oct. 1921 Detailer, Checker and Designer, Wellman-Seaver-Morgan Co. of Cleveland, Ohio, structural work on car dumpers, cranes, ore unloaders, furnaces, etc. *TT 1.7: P 1.7: RC 1.7: D 1.5.* Oct. 1921 to Oct. 1923 Engr., Pacific Lock Joint Pipe Co. of Seattle, in charge of design and construction of concrete sewer and water pipes, also on design of alternate propositions for bids and supervision of manufacture and installation of reinforced concrete pipe. *TT 2: P 2: RC 2: D 1.* Oct. 1923 to Dec. 1924 Asst. Engr., Public Works Dept., Tacoma, on design of bridges, sewers, etc. *TT 1.2: P 1.2: RC 1.2: D 1.* Jan. 1925 to date Asst. Engr., Cushman Power Project, City of Tacoma, on design of towers, buildings, hydraulic works, special investigations and reports on commercial water and power projects; Supt. of Constr. of tower work, buildings and underground work for electrical construction. *TT 2.3: P 2.3: RC 2.3: D 1.3.* *TT 17.7: SP 4.2: P 13.5: RC 13.5: D 7.9.* Refers to W. H. Franklin, A. H. Fuller, W. A. Kunigk, J. C. Rathbun, C. H. Reeves, J. L. Stannard.

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(12) **RATTI, AUGUSTUS PETER**, 202 Burke Bldg., Seattle, Wash. (Age 32. Born Boston, Mass.) 1918 B. S. in Civ. Eng., Tufts Coll. *TT 2: SP 2.* May 1918 to date with U. S. Coast and Geodetic Survey, until Nov. 1918 as Deck Officer on wire-drag surveys, leveling and topography, from May to Aug. 1919 1st Officer, Str. *Explorer*, Seattle, Wash., Aug. 1919

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to April 1920 in charge of topographic survey of Lake Washington, Seattle, being Asst. on wire-drag survey and triangulation; remainder of time on surveys, topography, triangulation, hydrography, drafting, computing, etc., in Washington, S. E. Alaska, Porto Rico and Virgin Islands. *TT 8.5: SP 3.2: P 5.3: RC 5.2: D 0.1. TT 10.5: SP 5.2: P 5.3: RC 5.2: D 0.1.* Refers to H. A. Cotton, E. W. Eickelberg, J. H. Hawley, N. H. Heck, W. E. Parker, R. S. Patton, E. H. Rockwell, F. B. Sanborn, F. B. T. Siems.

952

(10) REDD, CARL LEITNER, Peachburg, Ala. (Age 26. Born Peachburg, Ala.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Nov. 1922 to Aug. 1924 with Louisville & Nashville R. R. Co., until Nov. 1923 as Rodman, then Concrete Inspector on concrete and steel work and in fabrication plant on caisson steel for Rigolets (La) Bridge, etc. *TT 1.8: SP 1.8. TT 3.8: SP 3.8.* Refers to J. B. Babcock, 3d, H. L. Bowman, C. M. Spofford.

953

(9) REESE, GEORGE ADAM, 818 Renkert Bldg., Canton, Ohio. (Age 36. Born Canton, Ohio.) 1912 completed 2-year engineering course at Ohio Univ. *TT 0.7: SP 0.7.* July 1912 to Oct. 1914 with Morgan Eng. Co., Memphis, Tenn., until Jan. 1913 as Rodman and Asst. Instrumentman, then Res. Engr. or Inspector in charge on drainage construction in Arkansas, and after May 1913 Transitman in charge of field party on topographic and hydrographic surveys. *TT 2.4: SP 2.4.* Jan. 1915 to April 1918 and Aug. 1919 to April 1920 with City of Canton, Ohio, as follows: Jan. to June 1915 Draftsman, and some special designing; June to Sept. 1915 Asst. Engr. on investigation and report on stream channel improvement and retaining wall; Sept. 1915 to Jan. 1916 Draftsman and special Inspector, Eng. Dept., on municipal improvements and special structures; Jan. 1916 to Jan. 1917 Res. Engr. in charge of construction of sewage-treatment plant; Jan. 1917 to April 1918 and Aug. 1919 to April 1920 Engr and Asst. Supt. of Water Works; supervision of construction, design and supervision, investigations and studies on new supply, pumping station and distributing reservoir. *TT 4.1 SP 1.3: P 2.8: RC 2.8: D 0.9.* April 1918 to Aug. 1919 with U. S. Army, part of time in France, being Engr. of special department (rents, requisitions and claims), investigations of water supplies, structures, etc. *TT 1: SP 0.5: P 0.5: RC 0.5.* April 1920 to date member of firm, McClaskey & Reese, Canton, on investigations, surveys, studies, reports, plans, specifications, supervision of water-works, sewerage, sewage-treatment, structures and flood protection. *TT 7.1: P 7.1: RC 7.1: D 7. TT 15.4: SP 5: P 10.4: RC 10.4: D 7.9.* Refers to W. H. Dittoe, O. N. Floyd, E. J. Lander, D. Lowensohn, A. E. Morgan, F. H. Waring, E. A. Zeisloft.

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(9) RENN, RAYMOND WILLIAM, 4414 Kemper Ave., St. Bernard, Ohio. (Age 32. Born New Albany, Ind.) 1927 C. E., Univ. of Cin. *TT 2: SP 2.* Nov. 1915 to Aug. 1917 and Feb. 1919 to Jan. 1920 Clerk, Div. Engr.'s office, Pennsylvania R. R., Louisville, Ky., maintenance-of-way accounting and office work. *TT 2.7: SP 2.7.* Aug. 1917 to Feb. 1919 with U. S. Army, until Jan. 1918 as non-commissioned officer, 1st Ind. Cavalry and 152d Infantry, Jan.-April 1918 at Third Officers' Training Camp, Leon Springs, Tex., May-Aug. 1918 2d Lieut., 151st Infantry, and Sept. 1918 to Feb. 1919 1st Lieut., 68th Infantry. *TT 1.5: SP 1.5: RC 0.7.* Jan. 1920 to Sept. 1922 and March 1924 to Oct. 1925 (co-operative work) Asst., Eng. Corps, P. R. R., at Louisville, Ky., and Cincinnati, Ohio, drafting, surveying, construction and maintenance. Sept. 1922 to March 1924 (co-operative work) Draftsman, Comms. of Sewerage, Louisville. *TT 2.7: SP 1: P 1.7: RC 1.* June 1926 to date Engr., Proctor & Gamble Co., Cincinnati, structural engineering and design, design of steel and reinforced concrete structures, estimating and plant engineering. *TT 1: P 1: RC 0.5: D 0.2. TT 9.9: SP 7.2: P 2.7: RC 2.2: D 0.2.* Refers to W. M. Caye, E. D. Gilman, R. L. Langenheim, H. B. Luther, C. N. Miller, H. Schneider.

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(3) RICE, HAROLD GORTON, 125 West Dominick St., Rome, N. Y. (Age 31. Born Lee Center, N. Y.) Licensed Prof. Engr. and Land Surveyor, New York State, Sept. 1917 to June 1918 student in Arch. Eng., Syracuse Univ. Spare time Draftsman in office of Prof. Hollenbeck. *TT 0.3 SP 0.3.* June 1911 to June 1915 (while student) Draftsman with F. W. Kirkland, Archt., Rome, N. Y. June 1915 to Jan. 1916 Draftsman, Rome (N. Y.) Wire Co. *TT 0.6: SP 0.6.* Jan. 1916 to Sept. 1917 Asst. Engr., C. W. Knight & Sons, Cons. Engrs., Rome. *TT 1.7: SP 0.7: P 1: RC 1.* July 1918 to June 1919 First Class Machinist Mate, U. S. Navy. July 1919 to April 1924 Engr., Rome Gas, Elec. Light & Power Co., drafting, design, construction and supervision of engineering work. *TT 4.7: P 4.7: RC 2.7: D 2.* May 1924 to March 1925 Engr., Northern New York Utilities, Rome Div., in charge of building construction, being Res. Engr. on new electric substation. *TT 0.9: P 0.9: RC 0.9.* April 1925 to date in private practice as Civ. Engr. at Rome, on design

and supervision of engineering construction. *TT 2.2: P 2.2: RC 1.1: D 1.1. TT 10.4: SP 1.6: P 8.8: RC 5.7: D 3.1.* Refers to J. P. Burns, L. A. Buras, W. P. Creager, J. H. Gandolfo, C. C. Hopkins.

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(7) **RICH, HAROLD JAMES**, 1009 Sixth Ave., Sault Ste. Marie, Mich. (Age 24. Born Sault Ste. Marie, Mich.) 1927 B. S., Mich. State Coll. *TT 2: SP 2.* Refers to C. L. Allen, C. M. Cade, F. A. Gould, H. C. Woods.

957

(10) **RILEY, AUBIE HILTON**, 416 Glenn Bldg., Atlanta, Ga. (Age 24. Born in Geneva County, Ala.) 1925 B. S. in C. E., Ala. Pol. Inst. *TT 2: SP 2.* Summer 1922 Instrumentman on surveys, etc., with County Engr., Houston County, Ala. Summer 1923 Rodman and Instrumentman on gravel road construction, and summer 1924 Inspector on concrete bridge and culvert construction, Alabama Highway Dept. Aug. 1923 to June 1924 and Aug. 1924 to June 1925 (while student) Asst. Engr., City of Auburn, Ala., on sidewalk and sewer construction, and (after Aug. 1924) Engr., Eureka Constr. Co., Auburn, on land subdivision. June 1925 to Oct. 1926 with Atlantic Coast Line R. R., until June 1926, as Draftsman, on design, detail and construction of steel bridges, then Instrumentman on road construction. *TT 1.5: SP 1.5: RC 0.5: D 1.* Nov. 1926 to date Asst. Engr., Georgia Power Co., Roadway Dept., special work on surveys, designs and details, construction of street car plants. *TT 0.7: P 0.7: RC 0.7. TT 4.2: SP 3.5: P 0.7: RC 1.2: D 1.* Refers to C. A. Baughman, R. P. Black, J. A. C. Callan, W. A. Hansell, C. A. Smith, F. C. Snow, S. R. Young.

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(9) **ROBERTS, EARL IVAN**, Box 50, R. F. D., Toledo, Ohio. (Age 36. Born Bristol, Ohio.) 1916 B. C. E., Ohio State Univ. *TT 2: SP 2.* May 1914 to May 1916 (part of time) Asst. Engr., Eng. Dept., Columbus, Ohio, on sewerage survey, measuring flow, rainfall and runoff and making studies for improvement to sewerage system. May to Oct. 1916 Res. Engr. for W. J. Sherman, Toledo, Ohio, on street paving. *TT 0.4: P 0.4: RC 0.4.* Oct. 1916 to Feb. 1917 Topographer, San. Eng. Dept., Lucas County, on survey; Res. Engr. on sewer construction. *TT 0.3: P 0.3: RC 0.3.* March 1917 to Feb. 1918 and Aug. 1919 to March 1924 Asst. Engr., State Dept. of Health, Columbus, Ohio, checking designs and making inspections of water supplies, sewerage systems and treatment works and (after Aug. 1919) supervising operation of water-purification plants. *TT 5.5: P 5.5: RC 5.5.* Feb. 1918 to July 1919 with U. S. Army until March 1918 as Private; March to Oct. 1918 Sergeant and Sergeant, 1st Class; Oct. 1918 to May 1919 2d Lieut., supervising water analysis laboratory, and after May 1919 1st Lieut., in charge of water laboratory and supervising operation of filtration plants, overseas. March 1924 to March 1927 associated with Wm. G. Clark, Toledo, Ohio, on water works at Barberton (\$750 000), Piqua (\$500 000) and Fremont (\$180 000), Ohio, and Decatur, Ill. (\$150 000), numerous small survey jobs in Toledo, in responsible charge of office, and in complete charge of structural design at Decatur, Fremont and of part at Piqua. *TT 3: P 3: RC 3: D 2.* March 1927 to date San. Engr., H. P. Jones & Co., on design of Toledo intercepting sewer system and sewage-treatment works. *TT 0.2: P 0.2: RC 0.2: D 0.2. TT 11.4: SP 2: P 9.4: RC 9.4: D 2.2.* Refers to G. Champe, W. H. Dittoe, F. H. Eno, H. P. Jones, W. H. Knox, C. T. Morris, G. N. Schoonmaker, F. H. Waring.

959

(10) **ROBERTS, MARVIN EDWARD**, 902 South High St., Columbia, Tenn. (Age 21. Born Columbia, Tenn.) 1927 B. E. in Civ. Eng., Vanderbilt Univ. *TT 2: SP 2.* Refers to F. J. Lewis, W. H. Schuerman.

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(1) **ROBERTS, STANLEY LASHMORE**, Miri, Sarawak, Borneo, via Singapore. (Age 33. Born Southampton, England.) Feb. 1912 to Oct. 1914 Fourth Asst. Engr. (Pupil), John Aird & Co., Public Works Contrs., London, England, on construction of two large graving docks at South Bank-on-Tees. *TT 2.7: SP 2.7.* Oct. 1914 to March 1918 with Dick Kerr & Co., Public Works Contrs., London, as Third Asst. Engr. on construction of Littleton Reservoir (Metropolitan Water Board) then Second Asst. Engr. on construction of three aerodromes, and finally First Asst. Engr. on erection of National Projectile Factory at Kingston, Surrey. *TT 3.4: P 3.4.* March 1918 to Jan. 1919 Sapper, Corporal, Sergeant and 1st Lieut., Royal Marine Engrs., British Army, on construction of Admiralty Mystery Towers at Shoreham, England, and other fortified works at Portsmouth, England. *TT 0.9: P 0.9: RC 0.5.* Jan. to Nov. 1919 Res. Engr., British Air Ministry, Dept. of Works and Bldgs. at Uxbridge (England) Aerodrome and Armament School. *TT 0.9: P 0.9: RC 0.9.* Feb. to Oct. 1920 First Asst. Engr. with his father on construction of slipway for Colby & Son, Lowestoft, England. *TT 0.7: P 0.7.* March 1921 to date (except April-Dec. 1926 on

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leave) Jun. Civ. Engr., and later Civ. Engr. on Company's concessions, Sarawak Oilfields, Ltd., Borneo (Shell Co.). *TT 5.7: P 5.7: RC 1.1: D 1. TT 14.3: SP 2.7: P 11.6: RC 2.5: D 1.* (Applies in accordance with Sec. I, Art. I, of the By-Laws.)

961

(10) **ROBERTS, THOMAS KESLER**, Box 1150, Greensboro, N. C. (Age 30. Born Red Springs, N. C.) 1922 B. E. in C. E., N. C. State Coll. *TT 2: SP 2.* Nov. 1918 to Sept. 1919 Instrumentman and Inspector on highway work. *TT 0.8: SP 0.8.* Summer 1921 Asst. Supt. on reinforced concrete bridge construction and June 1922 to May 1924 Supt. on highway and bridge construction, with P. R. Ashby, Engr. and Contr., Raleigh, N. C. *TT 1.9: SP 0.5: P 1.4: RC 1.4.* May 1924 to date Inspector, Instrumentman and Engr., Zoning and Planning, City of Greensboro, N. C., inspection on and preliminary surveys for highway construction, geodetic and topographic work. *TT 3: SP 0.5: P 2.5: RC 2.5.* *TT 7.9: SP 3.8: P 4.1: RC 4.1.* Refers to C. L. Mann, F. T. Miller, P. C. Painter, C. W. Smedberg, H. Tucker, G. D. Whitmore.

962

(3) **ROBERTS, WILLIAM H.**, 399 Woodbine Ave., Rochester, N. Y. (Age 41. Born Ashland, Wis.) 1904 to 1907 student, Michigan Coll. of Mines. *TT 1: SP 1.* Jan. 1907 to June 1908 Min. Engr., copper range, Consolidated Mining Co., Painesdale, Mich., in charge of surveys and mapping. *TT 1.5: P 1.5.* June 1908 to Nov. 1912 Draftsman, successively with Ojibway (Mich.) Mining Co. on mapping and detail of mine structures, Minnesota Steel Co. of Duluth, Minn., on detail and design of steel structures and open hearth furnace, and (after Jan. 1912) Repath & McGregor Eng. Co. of Douglas, Ariz., on design of steel mill buildings and furnace for copper smelter. *TT 3.2: SP 0.4: P 2.8: RC 2: D 1.3.* Nov. 1912 to May 1913 Mine Supt., Maria Mine, Arizpe, Sonora, Mexico, in charge of small silver mine. *TT 0.6: P 0.6: RC 0.6.* June 1913 to June 1914 Min. Engr., Shattuck & Arizona Mining Co., Bisbee, Ariz., in charge of mine surveys and records. *TT 1: P 1: RC 1.* Aug. 1914 to date with City of Rochester, N. Y., until April 1915 as Inspector on construction of additional water supply, and since then Asst. Engr., Dept. of Eng., being Field Engr. in charge of work, reporting to Chf. Engr., on Main St. Tunnel Sewer (\$350 000), flood protection of Genesee River (\$950 000), construction of Clarissa St. Bridge (\$500 000) and Rapid Transit Subway R. R. (\$10 000). *TT 12.8: P 12.8: RC 12. TT 20.1: SP 1.4: P 18.7: RC 13.6: D 1.3.* Refers to F. A. Delavau, E. A. Fisher, I. E. Matthews, J. A. O'Connor, C. A. Poole, J. F. Skinner.

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(7) **ROETMAN, EDMOND TEERINK**, 215 North Hyland Ave., Ames, Iowa. (Age 23. Born Dickey, N. Dak.) 1927 B. S. in C. E., Iowa State Coll. *TT 2: SP 2.* Refers to R. A. Caughey, J. S. Dodds, W. L. Foster, A. H. Fuller, F. Kerekes.

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(14) **ROHWEDDER, HARRY ROBERT**, Mendon, Mo. (Age 23. Born Mendon, Mo.) 1927 B. S. in Eng., Univ. of Mo. Summer 1926 Draftsman, Winston-Dear Steam Shovel Co., Minneapolis, Minn., on preliminary work for spur line to Chicago & Alton R. R. *TT 2: SP 2.* Refers to A. L. Hyde, H. A. LaRue, H. K. Rubey.

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(7) **ROWE, NORMAN LESLIE**, 3d, 236 West Wilkins St., Jackson, Mich. (Age 23. Born Jersey City, N. J.) 1926 M. E., Stevens Inst. Tech. *TT 2: SP 2.* July to Sept. 1926 Machinist and Inspector of raw materials, Saginaw Products Co. of Gen. Motors Corporation. *TT 0.2: SP 0.2.* Sept. 1926 to date Draftsman, Commonwealth Power Corporation. *TT 0.7: SP 0.7. TT 2.9: SP 2.9.* Refers to F. B. Kiel, E. Maerker, A. Streiff, W. W. Tefft, N. Van Eenam.

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(10) **SAMMONS, JACK CHESTER**, P. O. Box 2625, Ft. Myers, Fla. (Age 26. Born Louisa, Ky.) 1923 B. S. in C. E., Univ. of Ky. *TT 2: SP 2.* Summers 1921 and 1922 Rodman, Kentucky State Highway Dept. June 1923 to date with U. S. Coast and Geodetic Survey, until June 1926 as Jun. Officer, and since then Executive Officer on Str. *Hydrographer.* *TT 4: P 4: RC 1. TT 6: SP 2: P 4: RC 1.* Refers to C. A. Egner, E. H. Pagenhart, H. A. Seran, O. W. Swainson, D. V. Terrell.

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(3) **SCHAUFFLER, HENRY ALBERT**, Schenectady, N. Y. (Age 38. Born New Rochelle, N. Y.) 1912 C. E., Princeton Univ. 1922 M. S. in C. E., Union Coll., Schenectady, N. Y. *TT 2: SP 2.* Feb. 1910 to Feb. 1911 Supt., Durando Miller Iron Works, New York City, on design and supervision of erection of iron work for loft and office buildings. *TT 1: SP 0.7: P 0.3: D 0.2.* July to Oct. 1912 Rodman, Canadian Pacific R. R., acting as Instrumentman, Note keeper and Computer. *TT 0.2: SP 0.2.* Oct. 1912 to May 1915 Chairman and Rodman, Pennsylvania R. R., Constr. Dept., acting as Draftsman, Instrument-

man, Inspector and Chf. of Party, on surveys, track layouts, estimates, etc. *TT 2.6: SP 2.6.* May 1915 to Aug. 1917 Draftsman, Long Island R. R., Chf. Engr.'s office, on design and estimates of yard and track layouts, grade-crossing eliminations, and design and investigation of track standards and specialties. *TT 2.3: SP 1.5: P 0.8: D 0.8.* Sept. 1917 to May 1919 with J. A. P. Crisfield Contr. Co., on Stevenson (Conn.) Hydro-Elec. Development, 7 months as Chf. Draftsman and remainder of time Office Engr. and Purchasing Agt. on preliminary construction, in charge of drafting room, field office, purchase of construction equipment, etc. *TT 1.7: P 1.7: RC 1.7.* June to Aug. 1919 Surveyor and Draftsman with Grassman & Kreh, Engrs. and Surveyors, Elizabeth, N. J. *TT 0.2: SP 0.2.* Sept. 1919 to date with Civ. Eng. Dept., Union Coll., Schenectady, N. Y., as Instructor, graduate student (2 years) and Asst. Prof. (4 years). Summers 1921 and 1922 Asst. Cons. San. Engr., Adirondack League Club, Little Moose, N. Y., on sanitary inspections of camps and lodges on club preserve, investigation for water supplies and garbage disposal. Summer 1928 Asst. Engr., City Engr.'s office, Schenectady, establishing street and sewer grades. *TT 8: P 8: RC 4.4: D 0.2.* *TT 18.1: SP 7.3: P 10.8: RC 6.1: D 1.2.* Refers to T. J. Carille, T. Horton, W. B. Landreth, F. P. McKibben, H. Miller, R. F. Olds, W. C. Taylor.

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(10) **SCHMITT, HARRY ANDREW**, Box 625, Chapel Hill, N. C. (Age 22. Born Valley Falls, Kans.) 1927 B. S., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, H. F. Janda.

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(8) **SCHWEIM, HENRY JULIUS**, 844 Rush St., Chicago, Ill. (Age 38. Born Chicago, Ill.) 1907-1911 (evenings) student in Eng., Armour Inst. of Technology, Chicago. 1906 to 1915 Draftsman, Estimator and Chf. Draftsman, National Fire Proofing Co., Chicago. *TT 9: SP 6: P 3: RC 3.* Sept. 1915 to Jan. 1926 Sales Engr., Testing Engr., Sales Supervisor and Dist. Mgr., U. S. Gypsum Co., and Jan. 1926 to date Chf. Engr., The Gypsum Industries, Chicago, in 1918 supervised and arranged for fire and water tests at Underwriters Laboratories; Sept. 1918 to 1926 Dist. Mgr., Fireproofing Dept., New York City, in complete charge of all contract and erection work in Eastern Territory. *TT 11.5: SP 4: P 7.5: RC 7.5.* *TT 20.5: SP 10: P 10.5: RC 10.5.* Refers to F. H. Alcott, E. W. Chamberlin, A. Epstein, L. H. Miller, R. P. Miller, C. E. Paul.

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(13) **SCOTT, JOHN WALTER**, Cherry St., Auburn, Cal. (Age 35. Born Toronto, Ont. Canada.) Aug. 1912 to March 1916 Rodman and Chainman with Pacific Gas & Elec. Co. and (after Feb. 1913) with Beugler & Boardman, Oakland, Cal., and others. *TT 3.6: SP 3.6.* May 1916 to July 1917 not on engineering work. Aug. 1917 to Jan. 1918 Levelman, Transitman and Office Computer with Duryea, Haehl & Gilman, San Francisco, Cal., on preliminary investigation of western states gas and electric project. *TT 0.5: SP 0.5.* Feb. 1918 to Aug. 1919 Asst. Res. Engr., Bethlehem Shipbuilding Corporation, Alameda, Cal., in responsible charge of layout and inspection. *TT 1.5: P 1.5.* Aug. to Sept. 1919 Contr. on wharf repairs for Sunset Lumber Co., Oakland. *TT 0.1: P 0.1: RC 0.1.* Oct. 1919 to May 1920 Field Asst., Cordua Irrigation Dist., Marysville, Cal., in charge of layout and construction of irrigation canals. *TT 0.6: P 0.6: RC 0.6.* July to Dec. 1920 Party Chf., on location of 20-mile division of main canal, North Unit, Deschutes Irrigation Dist., Madras, Ore. *TT 0.4: P 0.4: RC 0.4.* April to May 1921 Instrumentman and Computer with Fred H. Tibbetts, San Francisco. *TT 0.2: P 0.2.* June to Aug. 1921 Res. Engr., Reclamation Dist. 2047, Colusa, Cal., on construction of pumping plant and gravity outlet through levee. *TT 0.2: P 0.2: RC 0.2.* Aug. 1921 to date Party Chf. and Res. Engr., principally with Fred H. Tibbetts, on reclamation and irrigation construction in Glenn-Colusa Irrigation Dist., Reclamation Dists. 108 and 70 and Nevada Irrigation Dist. *TT 5: P 5: RC 5.* *TT 12.1: SP 4.1: P 8: RC 6.3.* Refers to A. D. Edmonston, F. C. Herrmann, R. Matthew, F. H. Tibbetts, A. L. Trowbridge, R. G. Wadsworth.

971

(4) **SCOTT, MAHLON DOUDS**, 545 Kathmere Rd., Upper Darby, Pa. (Age 36. Born Pittsburgh, Pa.) Sept. 1910 to Oct. 1913 student in Civ. Eng., Carnegie Inst. of Technology. *TT 1: SP 1.* July 1907 to 1908 Tracer and Blue Printer, Harbison Walker Refractories Co., Pittsburgh, Pa. *TT 0.7: SP 0.7.* March 1908 to Sept. 1910 Chainman, Rodman and Transitman for W. A. Hirtle, C. E., and J. Toner Barr, C. E., Pittsburgh. *TT 2.5: SP 2.5.* Oct. 1913 to June 1914 Constr. and Plant Engr., Aluminum Co. of America, Maryville, Tenn. *TT 0.7: P 0.7.* June to Nov. 1914 Recorder, Lake Erie & Ohio River Ship Canal Survey, Pittsburgh, topographical work in Ohio and Pennsylvania. *TT 0.5: SP 0.5.* June to Oct. 1915 Chf. Engr., McIntosh Hemphill Co., Pittsburgh, in charge of plant construction of Aetna Chemical Co., Carnegie, Pa. *TT 0.4: P 0.4: RC 0.4.* Oct. 1915 to May 1916 Chf. Engr., Duquesne Association of Pittsburgh, in charge of U. S. land subdivision in Green River, Utah. *TT 0.7: P 0.7: RC 0.7.* June to Sept. 1916 Chainman and Inspector, U. S. Govt. on Panama

Canal, Canal Zone. *TT 0.3: SP 0.3.* Oct. 1916 to March 1917 Transitman and Draftsman, with Harry J. Lewis, Pittsburgh, building ice breakers in Ohio River. *TT 0.5: SP 0.5.* May 1919 to date with Consolidated Expanded Metal Cos., until June 1923 as Eng. Salesman, at Braddock, Pa., estimating engineering problems and assisting in concrete reinforcing tests and since then Mgr., Pittsburgh and Philadelphia branch offices, in charge of designing buildings, vaults, etc. *TT 7.6: P 7.6: RC 3.6.* *TT 14.9: SP 5.5: P 9.4: RC 4.7.* Refers to J. D. Beatty, W. H. Buente, J. F. Laboon, F. M. McCullough, W. E. Mott, A. V. Spinosa, C. B. Stanton, H. R. Thayer.

972

(10) **SCOTT, ROBERT KENNETH**, 101 North Fifth St., Wilmington, N. C. (Age 21. Born Wilmington, N. C.) 1927 B. S. in C. E., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, H. F. Janda.

973

(1) **SEAMAN, AYRES CROMWELL**, 363 Grand Ave., Brooklyn, N. Y. (Age 22. Born Stamford, Conn.) 1927 B. S., Swarthmore Coll. *TT 2: SP 2.* Refers to W. E. Fuller, E. P. Palmer.

974

(13) **SEDGWICK, GEORGE ARTHUR**, 4730 Melrose Ave., Oakland, Cal. (Age 24. Born San Francisco, Cal.) 1927 B. S., Univ. of Cal. *TT 2: SP 2.* Summer 1925 Rodman, East Bay Water Co. Summer 1926 Asst. to Prof. R. E. Davis, computing and drafting, Aug. 1926 to May 1927 (part of time) Laboratory Asst., Materials Testing Laboratory, Univ. of California, concrete research in connection with test dam investigation of engineering foundation. May 1927 to date Detailer and Estimator, Dyer Bros., Golden West Iron Works. *TT 0.2: SP 0.2.* *TT 2.2: SP 2.2.* Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, C. G. Hyde, G. E. Troxell.

975

(1) **SEELY, GEORGE HERMAN**, 218 North Eighth Ave., Mt. Vernon, N. Y. (Age 23. Born Mt. Vernon, N. Y.) 1927 B. S. in Civ. Eng., N. Y. Univ. *TT 2: SP 2.* Refers to H. E. Breed, A. Haring, E. G. Hooper, C. T. Schwarze, C. H. Snow, D. S. Trowbridge.

976

(1) **SHAPE, ROBERT LOUIS**, 247 Park Ave., New York City. (Age 55. Born Milwaukee, Wis.) 1895 B. S. in Arch., Cornell Univ. Sept. 1895 to Jan. 1896 and July 1901 to July 1905 with Geo. B. Post, Archt., designing steelwork, and (after July 1901) Constr. Supt. on New York Stock Exchange and Coll. of City of New York. *TT 4.3: P 4.3: RC 4: D 0.3.* Jan. 1896 to Jan. 1900 with Clinton & Russell, designing steel and general construction. *TT 4: P 4: RC 1: D 3.* Jan. 1900 to July 1901 Engr., Cleveland (Ohio) Elec. Illuminating Co., designed and supervised two additions to plant. *TT 1.5: P 1.5: RC 0.5: D 1.* July 1905 to March 1918 member of firm Shape & Brady, Archts., New York City, as Engr. and in charge of construction of office and commercial buildings, apartment houses, and residences. *TT 13: P 13: RC 5: D 5.* March 1918 to July 1919 Production Engr., Todd Dry Dock & Shipbuilding Corporation, Tacoma, Wash. *TT 1.3: P 1.3: RC 1.3.* July 1919 to March 1920 Asst. Works Mgr., J. J. Coughlan Shipbuilding Co., Vancouver, B. C., Canada. *TT 0.6: P 0.6: RC 0.6.* March 1920 to Oct. 1922 Gen. Supt. of Constr., Wm. J. Taylor Co., Contrs., New York City, in charge of Canadian Pacific Bldg. *TT 2.6: P 2.6: RC 2.6.* Oct. 1922 to March 1925 with Starrett & Van Vleck, Archts., in charge of construction of Equitable Life Assurance Society Bldg. *TT 2.4: P 2.4: RC 2.4.* March 1925 to Jan. 1926 with Clinton & Russell, designing. *TT 0.8: P 0.8: RC 0.8.* Jan. 1926 to date with Chas. M. Hart, Archt., as Engr. and Constr. Supt. and at present member of firm, Hart & Shape, Archts. *TT 1.5: P 1.5: RC 0.8: D 0.5.* *TT 32: P 32: RC 19: D 9.8.* Refers to A. Brociner, J. Dougan, A. A. Macdonald, D. E. Moran, G. A. Noska, A. Weymouth.

977

(1) **SHAW, SAUL**, 24 Commerce St., Newark, N. J. (Age 35. Born Kovno, Lithuania.) 1915 B. S. in Civ. Eng., Cooper Union. *TT 2: SP 2.* Summer 1914 and May 1915 to Dec. 1916 Jun. Asst. Engr., Public Service Comm., First Dist., New York City, giving line and grade and supervising construction of sewers and subway work. *TT 1.7: SP 1.7.* Dec. 1916 to Feb. 1918 Structural Designer and Draftsman for C. E. Smith, Cons. Engr., St. Louis, Mo., Designer of railroad bridges, railroad electrification, commercial and industrial buildings. *TT 1.2: SP 0.2: P 1: D 1.* Feb. to Nov. 1918 Draftsman Maintenance Dept., Naval Air Craft Factory, Philadelphia Navy Yard, in charge of maintenance and repairs of factory buildings. *TT 0.8: P 0.8: RC 0.5: D 0.3.* Nov. 1918 to Dec. 1919 Designing Engr., Atlantic Refining Co., Philadelphia, supervising design of industrial buildings and refinery structures, responsible to Chf. Engr. *TT 1.1: P 1.1: RC 0.5: D 0.6.* Dec. 1919 to March 1921 member of firm, Shaw & Rishin, Cons. Engrs., Newark, N. J., designed structural steel and concrete. *TT 1.2: P 1.2: D 1.2.* March 1921 to Dec. 1922 Structural Designer, New York Board of Education,

Brooklyn, N. Y., designed steel and concrete work for large schools, including two high schools. *TT 1.7: P 1.7: D 1.7.* Dec. 1922 to April 1924 Chf. Engr., Katchen Shaw Iron Works, in charge of Eng. Dept. of structural steel plant at Irvington, N. J. *TT 1.2: P 1.2: RC 1.2.* April 1924 to date member of firm, Saul Shaw & Co., Structural Engrs., Newark, structural designing on buildings. *TT 3.2: P 3.2: D 3.2.* *TT 14.3: SP 3.9: P 10.4: RC 2.3: D 8.1.* Refers to A. H. Bromley, H. C. Dinney, F. E. Foss, A. S. Hamill, C. E. Smith.

978

(4) **SHENAMAN, IRVIN SHAFFER**, 2952 North Taney St., Philadelphia, Pa. (Age 37. Born Lebanon, Pa.) Licensed Engr. in New York. Licensed Surveyor in Pennsylvania. 1908 to 1911 and (evenings) 1913 to 1916 student in mechanical drawing (2 years) and in civil engineering, Drexel Inst. 1924 completed Bldg. Contr's. course of International Correspondence Schools. Aug. 1911 to Aug. 1912 Axeman and Rodman, Pennsylvania State Highway Dept. *TT 1: SP 1.* Sept. to Dec. 1912 Timekeeper and Material Clerk, with Union Paving Co. of Philadelphia. *TT 0.2: SP 0.2.* March 1913 to Nov. 1916 with Survey Bureau, Philadelphia, 6 months as Rodman, then Transitman, about 8 months acting as Field Representative in charge of South Broad St. boulevard construction. *TT 3.5: SP 2.8: P 0.7: RC 0.7.* Nov. 1916 to Nov. 1917 Masonry Constr. Inspector, Bridge Dept., Reading Ry. Co., on concrete and steel river and highway bridges. *TT 1: SP 1.* Nov. 1917 to March 1918 Field Engr. on progress of construction of Hog Island Shipyard, Philadelphia, concrete and frame buildings, concrete shipways, railways, etc.; March to Aug. 1918 Second Asst. Bldg. Inspector, U. S. Ordnance Depot. *TT 0.7: SP 0.3: P 0.4: RC 0.4.* Aug. 1918 to March 1919 Asst. Town Engr., Merchant Shipbuilding Corporation, Harriman, Pa., on sewers, highways, river surveys and dredge work, town base line layout, office management, designs, etc. *TT 0.7: P 0.7: RC 0.7.* March 1919 to Jan. 1921 with Eastern Paving Co. of Philadelphia as Contrs.' Engr. and Gen. Representative in Pennsylvania, New Jersey and Delaware, on investigations, bids, highway construction supervision and surveys. *TT 1.7: P 1.7: RC 1.7.* March to July 1921 Cons. Engr. to County Engr., Whitehouse Station, N. J., surveys and designs for concrete bridges, culverts and highways. *TT 0.4: P 0.4: RC 0.4: D 0.4.* July to Oct. 1921 Cons. Engr. to Charles Seabrook Corporation, Bridgeton, N. J. (5 000-acre farm and town location), surveys and plans for reservoir, concrete warehouses and highways, and general utilities. *TT 0.2: P 0.2: RC 0.2: D 0.2.* March 1922 to Oct. 1925 Inspector and Chf. Inspector, Highway Bureau, Philadelphia, being Special Representative and Engr. for Chf. Engr. on concrete, granite block, asphalt and bituminous macadam highways and construction and dredge surveys. *TT 3.6: SP 3.6.* Oct. 1925 to date Asst. Engr. of Constr., Dept. of City Transit, Philadelphia, being Field Representative on railway terminal and warehouse and inspection shops construction, Fern Rock Yard section. *TT 1.5: P 1.5: RC 1.5.* *TT 14.7: SP 9: P 5.7: RC 5.7: D 0.7.* Refers to J. Adler, C. E. Myers, C. F. Puff, Jr., R. C. Scott, A. G. Singer, C. A. Young.

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(11) **SHIELDS, ARTHUR CLARENCE**, 329 Equitable Bldg., Denver, Colo. (Age 46. Born Eldon, Iowa.) Nov. 1898-Aug. 1923 with Chicago, Rock Island & Pacific Ry., until July 1902 as Rodman and Instrumentman, then Asst. Engr. with various divisions in charge of maintenance (9 years) and of construction of Biddle and Little Rock freight yards (2 years), and after July 1913 Div. Engr. at various locations. *TT 24.7: SP 3.6: P 21.1: RC 21.1.* Aug. 1923-Feb. 1925 Engr., M. of W., Feb. 1925 to April 1927 Asst. Gen. Mgr., in charge of maintenance of way and structures, and April 1927 to date Gen. Mgr., Denver & Rio Grande Western R. R., Denver, Colo. *TT 3.7: P 3.7: RC 3.7.* *TT 28.4: SP 3.6: P 24.8: RC 24.8.* Refers to J. G. Bloom, R. H. P. Ford, L. C. Fritch, E. T. Howson, P. M. LaBach, C. A. Morse, A. S. Zinn.

980

(4) **SHOEMAKER, ROBERT COMLY**, 109 South Twentieth St., Philadelphia, Pa. (Age 23. Born Philadelphia, Pa.) 1927 B. S. in C. E., Univ. of Pa. *TT 2: SP 2.* Refers to W. H. Barton, Jr., W. H. Chorlton, F. P. Witmer.

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(15) **SHUTTS, ELMER EDWARD**, P. O. Box 655, Lake Charles, La. (Age 34. Born Lake Charles, La.) 1916 B. S., The Wm. M. Rice Inst., Houston, Tex. *TT 2: SP 2.* 1908 to 1911 Chainman, Rodman, Draftsman and Instrumentman with Frank Shutts at Lake Charles, La., on survey, irrigation, drainage and railway construction work; summer vacations 1911 to 1916 Instrumentman, Draftsman and in charge of survey parties. *TT 3: SP 3.* 1916 to 1917 and 1919 to 1925 member of firm, F. Shutts & Sons, Engrs., Lake Charles, on general engineering, and (9 months) Chf. Engr. in full charge of construction and location of Christie & Eastern Ry. in Louisiana; after 1919 in charge of drainage work, railway location and construction, concrete design, irrigation, etc. *TT 6: P 6: RC 5: D 1.* 1917 to 1918 with U. S. Corps of

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Engrs. on Intercoastal canal work. *TT 1: P 1: RC 1.* 1918 to 1919 with U. S. Army as Private and finally 2d Lieut., Engrs., U. S. Army; at present 1st Lieut., U. S. Engr. Reserves. 1925 to date Chf. Engr., Lake Charles Harbor & Terminal Dist., in full charge of design and construction of ship channel terminal facilities for Port of Lake Charles (\$1 000 000 project). *TT 1.8: P 1.8: RC 1: D 0.8. TT 13.8: SP 5: P 8.8: RC 7: D 1.8.* Refers to M. M. Bernard, E. H. Coleman, J. F. Coleman, H. M. Gallagher, B. H. Grehan.

982

(9) **SICKEL, HORACE BOLIVAR ALLEN**, 8 East Broad St., Columbus, Ohio. (Age 42. Born Homer, Ill.) 1910 Sales Mgr., instructing rice-growers as to equipment of irrigation plants, etc., and 1915 to 1921 Gen. Mgr., Layne & Bowler Co., Arkansas Div., in charge of sixteen drilling rigs, five repair rigs, six engine erection crews, machine shop, etc. *TT 7.6: SP 0.6: P 7: RC 7: D 7.* 1910 to 1911 Sales Mgr., United Well Works, manufacturers of centrifugal pumping machinery, etc. *TT 0.8: SP 0.8.* 1912 to 1914 Cons. Engr., on design, erection and equipment of irrigation plants, sales, etc. in Arkansas. *TT 2: P 2: RC 2: D 2.* 1921 to 1922 Cons. Engr. and Contr., installed water supply for Champaign-Urbana Water Works, Champaign, Ill. (1921), had charge of sales and installed centrifugal pumps, etc. *TT 1: P 1: RC 1: D 1.* 1923 to 1925 Cons. Engr. Aurora Pump & Mfg. Co., designed and installed water-supply systems for Taylorville and Mt. Pulaski, Ill., and Rothchilds, Wis. *TT 2: P 2: RC 2: D 2.* 1925 to date Chf. Engr. and Vice-Pres., Layne-Ohio Co.; has charge of engineering in connection with exploration, development and installation of water-supply plants, including water supply for Dayton, Ohio (20 000 000 gal. daily). *TT 2: P 2: RC 2: D 2. TT 15.4: SP 1.4: P 14: RC 14: D 14.* Refers to G. C. Habermeyer, C. R. Knowles, F. A. Marston, W. W. Morehouse, R. R. Schweitzer, F. H. Waring.

983

(6) **SKILLING, ARTHUR WATTS**, 507 Westinghouse Bldg., Pittsburgh, Pa. (Age 26. Born Lawrence, Mass.) 1921 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Aug. to Sept. of year 1920 and 1921 Asst. Instructor, Summer Surveying Camp, Massachusetts Inst. of Technology. *TT 0.2: SP 0.2.* Oct. 1921 to Feb. 1925 Deck Officer, Aid, Jun. Hydrographic and Geodetic Engr., U. S. Coast and Geodetic Survey, hydrographic surveys, Willapa (Wash.) Bay and Bar and Lake Tahoe, Cal., and hydrographic and topographic surveys, Southeast Alaska. *TT 3.4: P 3.4: RC 2.* March 1925 to date Asst. Engr., with Morris Knowles, Inc., Pittsburgh, Pa., on water-supply problems, surveying, industrial appraisals and public utility valuations. *TT 2: P 2: RC 1. TT 7.6: SP 2.2: P 5.4: RC 3.* Refers to H. B. Campbell, C. K. Green, G. L. Hosmer, M. Knowles, N. B. Jacobs, C. M. Spofford, E. S. Taub.

984

(4) **SLOAN, DAVID BARTLETT**, R. D. No. 2, Princeton, N. J. (Age 22. Born Ravenna, Ohio.) 1925 B. S., and 1927 C. E., Princeton Univ. *TT 2: SP 2.* Refers to G. E. Beggs, F. H. Constant, D. Sloan, W. G. Sloan.

985

(11) **SLOBODA, EDWARD**, Los Angeles, Cal. (Age 21. Born New York City.) 1927 C. E., Rens. Pol. Inst. *TT 2: SP 2.* Refers to E. R. Cary, L. W. Clark, T. R. Lawson, W. W. Rousseau.

986

(1) **SMALL, GEORGE ELDRIGE**, 91 Park St., Montclair, N. J. (Age 46. Born Lincoln City, Del.) Sept. 1896 to Dec. 1902 Apprentice, Robt. Wetherhill & Co., Chester, Pa., in pattern and machine shops, foundry and drawing room. Dec. 1902 to April 1908 with Eddystone (Pa.) Mfg. Co., in charge of design and construction of special machinery for calico bleaching, dyeing and finishing. *TT 5.3: P 5.3: RC 2.8: D 2.5.* April 1908 to July 1910 with Ladd & Baker, Cons. Engrs., Philadelphia, Pa., on blast furnaces, automatic and special machinery, industrial and power plants; in charge of office. *TT 2.3: P 2.3: RC 2.3.* July 1910 to July 1914 in private practice (Partnership), in England, Holland, Belgium and France, on reinforced concrete dwellings and industrial plants. *TT 4: P 4: RC 4.* July 1914 to May 1920 Asst. Chf. Engr. (3 years) and Chf. Engr., Nichols Copper Co., Laurel Hill, N. Y., processes for copper smelting and refining. *TT 5.8: P 5.8: RC 5.8.* May 1920 to Dec. 1921 Vice-Pres. and Secy., Cantilever Aero Co., New York. *TT 1.6: P 1.6: RC 1.6.* Dec. 1921 to Dec. 1923 with W. E. Truesdell, Cons. Engr., New York City, on power and industrial plants, paper mills, reinforced concrete work, in charge of office and outside supervision. *TT 2: P 2: RC 2.* Dec. 1923 to March 1924 with H. L. Doherty & Co., New York City, on foundations, and superstructures for utility plants. *TT 0.2: P 0.2: D 0.2.* March 1924 to June 1925 with George B. Post & Co., New York City, on design of steel and retaining walls for Roosevelt and Olympic Hotels, New York and Seattle, Wash. *TT 1.2: P 1.2: D 1.2.* June to Sept. 1925 with West Gas Improvement Co., New York, on heavy foundations and concrete piling for coke ovens; in charge of field work for foundations for plant extension, Portland Gas Light Co. *TT 0.2: P 0.2: RC 0.2.* Sept. 1925 to Feb. 1927

Bldg. Engr., General Industrial Eng. Co., Passaic, N. J., in charge of estimating and of supervising construction. *TT 1.4: P 1.4: RC 1.4. TT 2.4.3: P 2.4.3 RC 16.3: D 4.* Refers to J. L. Averill, P. Clow, A. I. Heim, W. H. Hunt, C. E. Payne.

987

(9) SMILEY, PAUL EWING, 263 Grove Ave., Dayton, Ohio. (Age 23. Born Alice, Ohio.) 1927 B. S. C. E., Purdue Univ. Summers 1923 and 1924 Rodman, and Summers 1925 and 1926 and at present Transitman with City of Dayton, Ohio. *TT 2: SP 2.* Refers to C. S. Bennett, W. W. Morehouse, R. B. Prinz, R. B. Wiley.

988

(2) SMITH, CHARLES ALLAN, 341 Willow St., New Haven, Conn. (Age 23. Born New Haven, Conn.) 1927 B. S., Sheffield Sci. School. *TT 2: SP 2.* Refers to C. T. Bishop, P. G. Laurson, C. J. Tilden, J. C. Tracy, E. W. Wiggins.

989

(10) SMITH, COLTON MUMFORD, Jr., 3106 Eleventh St., Gulfport, Miss. (Age 22. Born Brookhaven, Miss.) 1927 B. E., Univ. of Miss. *TT 2: SP 2.* Sept. 1924 to Sept. 1925 Surveyman, U. S. Engr. Dept. Port Eads (La.) Sub-Office. *TT 1: SP 1. TT 3: SP 3.* Refers to J. H. Dorroh, W. B. Smith.

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(13) SMITH, EDWARD DURANT, 2901 Pacific Ave., San Francisco, Cal. (Age 23. Born Salt Lake City, Utah.) 1927 A. B., C. E. Dept., Stanford Univ. *TT 2: SP 2.* June to Nov. 1925 Draftsman, Joshua Hendy Iron Works. June to Oct. 1926 Chainman, with T. O. Russell, Eugene, Ore., on slab creek survey, railroad location. Oct. 1926 to date teaching field work in advanced surveying, Stanford Univ. *TT 0.3: SP 0.3. TT 2.3: SP 2.3.* Refers to J. C. L. Fish, C. Moser, L. B. Reynolds, E. C. Thomas, C. B. Wing.

991

(1) SMITH, KENNETH ALEXANDER, 84 Fourth Ave., Malba, N. Y. (Age 22. Born Stent, Cal.) 1927 B. S., Mass. Inst. Tech. Feb. 1926 to June 1927 (vacations and while student) in office of Supt. of Bldgs. and Power, Massachusetts Inst. of Technology, drafting, surveying, etc. *TT 2: SP 2.* Refers to J. B. Babcock, 3d, H. K. Barrows, C. B. Breed, W. M. Fife, E. Mirabelli, C. M. Spofford, C. Terzaghi.

992

(12) SMITH, RICHARD WILSON, 603 Pontius Ave., Seattle, Wash. (Age 28. Born Boston, Mass.) 1927 B. S. in C. E., Univ. of Wash. *TT 2: SP 2.* Nov. 1922 to Jan. 1924 Quartermaster, 2d Class, U. S. Coast and Geodetic Survey, on hydrographic and geodetic surveys, acted as Rodman, Recorder and Asst. with wire-drag parties. Summer 1925 Rodman, Riverside Min. Co., Hyder, Alaska, surveying mining claims. Summer 1926 Bldg. Inspector, Ketchikan Light, Power & Water Co., on construction of 4-story reinforced concrete building, and Transitman on topographic survey. Oct. 1926 to April 1927 Draftsman, Puget Sound Title Insurance Co., plotting tax descriptions of property. June 1927 to date Inspector, Washington State Highway Dept., on computation of material and quantities in highway work. *TT 1.3: SP 1.3. TT 3.3: SP 3.3.* Refers to W. F. Allison, I. L. Collier, C. W. Harris, J. H. Hawley, C. C. More.

993

(8) SMITH, ROBERT JOHN, 1400 East Fifty-Third St., Chicago, Ill. (Age 23. Born Findlay, Ohio.) Associate in Eng., Univ. of City of Toledo. 1927 B. S. in Eng., Univ. of Mich. *TT 2: SP 2.* Refers to A. J. Decker, W. C. Hoad, H. E. Riggs, R. H. Sherlock, C. O. Wisler.

994

(8) SMITH, WALDO EDWARD, 210 Eng. Hall, Urbana, Ill. (Age 26. Born New Hampton, Iowa.) 1923 B. E., and 1924 M. S. in C. E., Univ. of Iowa. *TT 2: SP 2.* June 1923 to June 1924 Graduate Student in Civ. Eng., Univ. of Iowa. *TT 1: P 1.* June 1924 to Jan. 1926 with Burns & McDonnell Eng. Co., until Aug. 1925 as Office Asst. at Kansas City, Mo., studying maps, etc., preparing preliminary report on 120 000 h. p. hydro-electric project, drafting, checking, minor design, etc., then Res. Engr. in charge of construction of a reinforced concrete covered reservoir at Ponca City, Okla. *TT 1.6: SP 0.6: P 1: RC 0.6: D 0.2.* Jan. to Feb. 1926 Instrumentman with Black & Veatch and E. M. Stayton, Cons. Engrs., Kansas City, Mo., on preliminary sewer work. *TT 0.1: SP 0.1.* Feb. 1926 to Feb. 1927 with Black & Veatch, Cons. Engrs., Kansas City, until June 1926 as Asst. Field and Office Engr., then Res. Engr. on steam power plant improvements at Kingfisher, Okla., including addition to power-plant building and installation of two 300-h. p. water-tube boilers, and after Oct. 1926 Asst. Office Engr. *TT 1: P 1: RC 0.7.* Feb. 1927 to date Instructor in Theoretical and Applied Mechanics, Coll. of Eng., Univ. of Illinois. *TT 0.2: P 0.2. TT 5.9: SP 2.7: P 3.2: RC 1.3: D 0.2.* Refers to E. H. Dunmire, M. L. Enger, R. E. McDonnell, F. A. Nagler, N. T. Veatch, Jr., S. M. Woodward.

995

(1) **SMYTHE, HAROLD EARLE**, Dist Engr., Public Works Dept., Suva, Fiji. (Age 31. Born Lismore, New South Wales.) 1920 B. E. in C. E., Univ. of Sydney, Australia. *TT 2*. Nov. 1918 to Jan. 1919 City Surveying with Cowdery & Son, Sydney, municipal schemes, roads, etc. *TT 0.2: D 0.2*. Jan. to March 1919 Irrigation surveying, New South Wales Water Conservation and Irrigation Comm., on Burrinjuck Dam catchment area surveys. *TT 0.2: D 0.2*. May 1920 to Feb. 1921 Surveyor and Designing Draftsman, on steel and reinforced concrete structures, with Hoskins Iron & Steel Co., Ltd., Lithgow, New South Wales. *TT 0.8: D 0.8*. 1921 to date with Public Works Dept., until March 1923 as Asst. Engr., Colony of Fiji, being Engr.-in-Chg. of new water supply works, sewerage, etc. (total £40 000), then Dist. Engr., Lautoka Dist., being Engr.-in-Chg. of public works, also Technical Adviser to six Provincial Road Boards (expenditure £24 000 annually) and since June 1926 Dist. Engr., Suva Dist., Fiji, being Senior Executive Engr. in charge of public works £58 000 annually). *TT 6: RC 6*. *TT 9.2: RC 6: D 1.2*. Refers to W. A. Miller. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

996

(1) **SOLER, GABRIEL**, 14 Hernandez St., Miramar, Porto Rico. (Age 25. Born Utuado, Porto Rico.) 1926 B. S. in Civ. Eng., Univ. of Porto Rico. *TT 2: SP 2*. Aug. 1920 to June 1921 Draftsman and Transmittan, Isabela Irrigation Service, on location of canal line and location and construction of a road. *TT 0.9: SP 0.9*. Summers 1922 and 1923 Transmittan and Levelman on construction of aqueduct for San Juan, Porto Rico. Aug. 1926 to March 1927 Supt. of Constr., with Salvador Quinones, Rio Piedras, Porto Rico, on 3 km. of highway and a bridge. *TT 0.7: P 0.7*. March 1927 to date Asst. in designing water-purification plant, Del Valle & Co. of San Juan and New York. *TT 0.1: P 0.1: D 0.1*. *TT 3.7: SP 2.9: P 0.8: D 0.1*. Refers to M. V. Domenech, M. Font, R. A. Gonzalez, R. Ramirez, F. J. Sette, C. del Valle Zeno.

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(4) **SOWDEN, HERBERT JONES**, 4445 North Ninth St., Philadelphia, Pa. (Age 43. Born Philadelphia, Pa.) 1901 to 1914 Rodman, Philadelphia & Reading Ry. *TT 13: SP 13: RC 9: D 2*. 1914 to 1915 Supt. of Constr. with Chas. P. Bower, Chestnut Hill, Pa. *TT 1: P 1: RC 1*. 1915 to date with City of Philadelphia, 8 years as Inspector of sewer, concrete and bridge construction, one year Asst. Engr. of Constr. on abolishment of grade crossings in Southern Philadelphia, and since 1924 Asst. Engr. of Sewer Constr., Bureau of Eng. *TT 11: P 11: RC 2: D 2*. *TT 25: SP 13: P 12: RC 12: D 4*. Refers to C. Dillenbeck, C. H. Hitchcock, A. Z. Hoffman, E. R. Schofield, H. T. Shelley, A. G. Singer, S. T. Wagner.

998

(6) **SPAFFORD, HILDRETH ANCEL**, Box 997, Logan, W. Va. (Age 25. Born Cromwell, Iowa.) 1927 B. E., Univ. of Iowa. June 1927 to date San. Inspector for Logan County, W. Va. *TT 2: SP 2*. Refers to A. H. Holt, R. B. Kittredge, B. J. Lambert, F. A. Nagler, E. L. Waterman, C. C. Williams.

999

(5) **SPEERT, JULIUS LOUIS**, 2361 West North Ave., Baltimore, Md. (Age 21. Born Baltimore, Md.) 1926 S. B. in Civ. Eng. and San. Eng., and 1927 S. M., Mass. Inst. Tech. *TT 2: SP 2*. Refers to C. M. Spofford, R. G. Tyler.

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(10) **SPESSARD, RICHARD HUYETTE**, 308 Lloyd St., Greenville, S. C. Graduating student awarded Virginia Section prize. (Age 20. Born Annville, Pa.) 1927 B. S. in Civ. Eng., Washington and Lee Univ. *TT 2: SP 2*. Refers to H. L. Hagerman, W. T. Lyle.

1001

(6) **SPRINGER, FREDERICK WARD**, 808 River Ave., Toronto, Ohio. (Age 33. Born Kokomo, Ind.) 1918 B. S., Rose Pol. Inst. *TT 2: SP 2*. Jan. 1918 to March 1919 with Meteorological Sec., Signal Corps, U. S. Army. *TT 1.2: SP 1.2*. April to Sept. 1919 Sales Engr., Vonnegut Machinery Co., Indianapolis, Ind., on design and sale of ventilation and exhaust systems. *TT 0.5: P 0.5: RC 0.5: D 0.5*. Sept. 1919 to Sept. 1922 with Youngstown (Ohio) Sheet & Tube Co., on blast-furnace operation. *TT 3: SP 3*. Sept. 1922 to April 1926 with D. P. Robinson Co., of New York City, at Pittsburgh, Pa., until Nov. 1922 Draftsman and Engr.'s Clerk; April 1923 to Nov. 1924 Cost Engr.; Nov. 1922 to April 1923 and Nov. 1924 to April 1926 Field Engr., successively on Bellevue, Lawrence and Stanwix Substations for Duquesne Light Co. *TT 3.6: SP 0.2: P 3.4: RC 3.4*. April 1926 to date Asst. Res. Engr. with Stevens & Wood, Inc., Toronto, Ohio, on power station (four 30 000-kw. units) for Ohio River Edison Co. *TT 1.1: P 1.1: RC 1.1*. *TT 11.4: SP 6.4: P 5: RC 5: D 0.5*. Refers to J. C. Balcomb, T. A. Currie, Jr., R. L. McCormick, F. E. Murphy, W. E. Swift, H. A. Thomas.

1002

(2) **SPURR, JEROME LYON**, 66 Hartford St., Dorchester, Mass. (Age 22. Born Dorchester, Mass.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to H. K. Barrows, C. M. Spofford.

1003

(4) **STETINA, HENRY JOHN**, Y. M. C. A., Pottstown, Pa. Graduating student awarded Philadelphia Section prize. (Age 21. Born Philadelphia, Pa.) 1927 B. S. in C. E., Drexel Inst. *TT 2: SP 2.* June 1924 to Jan. 1925 Chainman and Rodman, and June 1925 to Jan. 1926 Asst. Inspector on concrete highway construction, Pennsylvania State Highway Dept. June 1927 to date Structural Detailer and Draftsman, McClintic-Marshall Constr. Co., Pottstown, Pa. *TT 1.2: SP 1.2. TT 3.2: SP 3.2.* Refers to H. L. Bowman, C. Dillenbeck, M. G. Littlefield, R. A. Pendergrass, G. H. Shaw, L. C. Urquhart.

1004

(15) **STEVENSON, HOMER EADS**, El Salto de Tepuxtepec, Michoacan, Mexico. (Age 23. Born San Luis Potosi, Mexico.) Sept. 1921 to June 1923 student, Dept. of Civ. Eng., Texas Agricultural and Mechanical Coll. *TT 0.6: SP 0.6.* June 1923 to Jan. 1926 with W. E. Simpson Co., Cons. Engrs., San Antonio, Tex., until Aug. 1924 as Draftsman on highway plans and estimates and Inspector on reinforced concrete construction, then Transitman on highway location, and after Sept. 1924 Res. Engr. on highway construction, concrete bridges. *TT 2.7: SP 1.3: P 1.4: RC 1.4.* Jan. to Dec. 1926 Constr. Engr., and Dec. 1926 to date Office Engr., Mexican Light & Power Co., Ltd., on hydro-electric construction, reinforced concrete, structural steel, foundations, excavation, etc. *TT 1.4: P 1.4: RC 1.4. TT 4.7: SP 1.9: P 2.8: RC 2.8.* Refers to A. J. McKenzie, W. Ranney, W. E. Simpson. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

1005

(13) **STOCKBRIDGE, GLENN HENRY**, Box 605, Stanford University, Cal. (Age 21. Born Los Angeles, Cal.) 1926 A. B., Stanford Univ. Summers 1923 and 1924 Chainman and Rodman, Southern California Edison Co., on surveys, etc. Summer 1925 with Geo. W. Tuttle, Los Angeles, Cal., as Chainman, Rodman, and Instrumentman and Chf. of Party for real-estate subdivision. *TT 2: SP 2.* Refers to J. C. L. Fish, C. Moser, L. B. Reynolds, H. E. Warrington, C. B. Wing.

1006

(9) **STRANGE, LOWBER BURROWS**, 510 East North Broadway, Columbus, Ohio. (Age 24. Born Minneapolis, Minn.) 1927 B. C. E., Ohio State Univ. *TT 2: SP 2.* Refers to C. T. Morris, J. C. Prior, J. R. Shank.

1007

(15) **STUBNER, CHARLES ERNEST**, 3231 Good Route St. John, New Orleans, La. (Age 56. Born Bischofswerda, Germany.) 1888 B. A., Coll. of Bautzen, Germany. 1888 to 1890 student, Acad. of Forestry, Tharand, Saxony. 1890 Asst. Forester, Godefroy & Sons, Hamburg, Germany, exploration work, Tonkin and Dutch Indies, reports on timber, etc. *TT 1: SP 1.* 1891 to 1892 Surveyor, Imperial German Govt. on roads and railroads in German East Africa. *TT 2: SP 2.* 1893 to 1894 Engr., C. Woerman & Co., Hamburg, Germany, exploration work in German West Africa, topographical surveys and reports on timber, etc. *TT 2: P 2: RC 2.* 1895 to 1896 Surveyor with Bruel Freres, Algiers, Algeria, surveys and plans for irrigation and roadwork. *TT 2: P 2: RC 1: D 1.* 1897 to 1900 Supt. of Sawmill and furniture factory, Loudonville (Ohio) Furniture Co. 1900 to 1905 Foreman and Supt. of Constr., various farms, Chicago and vicinity. 1906 to 1912 with Isthmian Canal Comm., Panama, until 1909 as Gen. Foreman of Constr., in charge of concrete work, Gatun Locks, then Supervisor of Constr., in charge of surveys, preparatory work and construction of aids for navigation for Panama Canal. *TT 3: P 3: RC 3.* 1913 to 1914 in charge of dock construction, Panama R. R. *TT 2: P 2: RC 2.* 1915 to 1918 in charge of building construction, Panama Canal. *TT 3: P 3: RC 3.* 1918 to 1923 Supervisor of Constr., Board of Comms., Port of New Orleans, in charge of construction work, Industrial Canal. *TT 4.5: P 4.5: RC 4.5.* 1924 Mgr., Quantity Survey Bureau, Gen. Contractors Association of New Orleans, quantity surveys for construction work. *TT 1: P 1: RC 1.* 1925 to date Mgr. and Owner, Quantity Survey Bureau, New Orleans, quantity surveys and estimates for construction work, appraisals. *TT 2.5: P 2.5. TT 23: SP 3: P 20: RC 16.5: D 1.* Refers to E. S. Bres, A. M. Fromherz, H. M. Gallagher, G. W. Goethals, O. K. Olsen, J. D. O'Reilly, J. Riess, W. L. Sibert.

1008

(11) **STUMP, ROBERT LEONARD**, 517 Ann St., Ventura, Cal. (Age 39. Born Nevada, Mo.) Licensed Surveyor, State of Idaho. 1911 B. S. in C. E., Univ. of Mo. *TT 2: SP 2.* June 1909 to Aug. 1910 Rodman and Chainman, Grand Trunk Pacific R. R., also acting as Estimator on construction. *TT 1.2: SP 1.2.* July to Nov. 1911 Transitman, Kansas City

Southern Ry. *TT 0.4: SP 0.4.* March 1912 to Aug. 1913 in private practice as Engr. and Surveyor, on surveys and investigations for installation of irrigation layouts for small ranches. *TT 1.5: P 1.5: RC 1.5.* Sept. 1913 to Sept. 1916 Asst. Highway Engr. and Deputy Surveyor, Vernon County, Mo., made surveys, and acted as Foreman on construction of culverts and erection of bridges. *TT 3: P 3: RC 3.* Oct. 1916 to Jan. 1920 Rodman (6 months) and Transitman, Missouri Pacific R. R. *TT 3.3: SP 3.3.* Feb. to Aug. 1920 Draftsman and Aug. 1920 to April 1922 Chf. Draftsman, Consolidation Coal Co., Pennsylvania Div., on design of layouts and structures, tipples, bins, etc., and directing draftsmen. *TT 2.2: P 2.2: D 2.2.* June 1922 to Feb. 1923 Asst. Res. Engr., California State Highway Comm., on bridge construction, inspecting materials and erection. *TT 0.7: SP 0.7.* Feb. 1923 to date Office Engr., Ventura County, Cal., designing roads, culverts and bridges and supervising mapping and design. *TT 4.2: P 4.2: D 4.2. TT 18.5: SP 7.6: P 10.9: RC 4.5: D 6.4.* Refers to S. G. Bennett, A. B. Diehr, C. W. Petit, G. C. Power, H. E. Reddick.

1009

(1) **SUTHERLAND, ROBERT ALEXANDER**, Queensland Irrigation and Water Supply Comm., College Road, Brisbane, Australia. (Age 29. Born Dunedin, New Zealand.) 1921 B. Sc. (Eng.), City and Guilds Eng. Coll., London, England. *TT 2: SP 2.* Nov. 1916 to Feb. 1917 Apprentice, J. Sparrow & Sons, Boiler Makers and Engrs., Dunedin, New Zealand. *TT 0.3: SP 0.3.* June to Oct. 1920 Apprentice, Draftsman, British Thomson Houston Co., Rugby, England. *TT 0.3: SP 0.3.* Oct. 1922 Draftsman with City Engr. of Dunedin. *TT 0.1: SP 0.1.* Nov. 1922 to March 1923 Asst. Engr., Boving & Co., Ltd., Hydr. Engr., Wellington, New Zealand, drawings for water-power plants, design of small turbines, inspection of pipe. *TT 0.3: SP 0.3.* Oct. to Nov. 1922 and April 1923-Aug. 1924 Eng. Asst., Elec. Engr., City Corporation, Dunedin, testing plant and reticulation, substation operation, erection of plant (hydro-electric). *TT 1.4: SP 0.9: P 0.5.* Sept. 1924 to date Asst. Designing Engr., Asst. Engr. for Designs, and Designing Engr., Queensland Irrigation & Water Supply Comm., Brisbane, Queensland, Australia, design and occasional supervision of water supply and irrigation work. *TT 2.8: P 2.8: RC 1.3: D 1.1. TT 7.2: SP 3.9: P 2.8: RC 1.3: D 1.1.* Refers to F. F. Fergusson, R. D. A. Frew, J. E. Fulton, L. Luiggi, F. McCormick, W. H. R. Nimmo.

1010

(12) **SUTTON, ARTHUR CHARLES**, 1640 Fowler Ave., Portland, Ore. (Age 26. Born Aguilar, Col.) Registered Prof. Civ. Engr., State of Oregon. 1924 B. S., Univ. of Ore. 1926 B. S., Mass. Inst. Tech. *TT 2: SP 2.* March to July 1920 Chainman and Rodman with Thomas & Meservey, Portland, Ore. *TT 0.3: SP 0.3.* Summer 1922 Chainman and Rodman Portland Elec. Power Co., on road construction. Summer 1923 Chainman, Rodman, level and transit, Eugene (Ore.) Water Board. Sept. 1923 to Jan. 1924 (while student) in charge of surveying, designing and drafting parts of athletic field, Univ. of Oregon, and of engineering and construction of the drainage system. March to Sept. 1924 Chainman, Rodman, Inspector and Draftsman, City of Eugene; surveying sewers, sidewalks, streets, inspecting construction and general drafting. *TT 0.2: SP 0.2.* Summer 1925 in charge of laying out and grading streets for paving, Eugene Sand & Gravel Co., involving surveying, handling machinery, etc. *TT 0.2: P 0.2.* Feb. to Sept. 1926 in charge of design, drafting and surveying, also computing estimates Inland Constr. Co., preliminary investigation and design of hydro-electric development and two water supplies. *TT 0.5: P 0.5: RC 0.2: D 0.2.* Sept. 1926 to Feb. 1927 on construction with Grant, Smith & Co., Contrs., on Lake Chelan Hydro-Electric Development, ran concrete mixer, set up steel forms for tunnel, etc. *TT 0.4: SP 0.4.* April 1927 to date Chainman, Levelman and Transitman on bridge construction, Cobb & Mitchell Co., general survey and construction. *TT 0.3: SP 0.3. TT 4: SP 2.9: P 1.1: RC 0.2: D 0.2.* Refers to H. K. Barrows, H. L. Bowman, C. B. Breed, L. Griswold, C. M. Spofford, C. H. Sutherland.

1011

(2) **SZLANDA, STANLEY**, 58 Hargraves St., Fall River, Mass. (Age 22. Born Fall River, Mass.) 1927 B. C. E., Northeastern Univ. *TT 2: SP 2.* Refers to E. A. Gramstorff, J. W. Ingalls.

1012

(9) **TAYLOR, CHARLES EDWARD**, 715 South Ludlow St., Dayton, Ohio. (Age 25. Born Dayton, Ohio.) 1927 B. S. in C. E., Univ. of Dayton. *TT 2: SP 2.* Sept. 1919 to March 1923 Rodman, Levelman and Engr. Inspector, City Engr.'s office, Dayton. *TT 3.4: SP 3.4.* March to Sept. 1923 Engr. Inspector, City of Sidney, Ohio. *TT 0.4: SP 0.4. TT 5.8: SP 5.8.* Refers to J. F. Hale, B. T. Schad.

1013

(13) **TEALE, GEORGE FRANCIS** 2327 Dwight Way, Berkeley, Cal. (Age 31. Born Riverside, Cal.) 1918 B. S., Univ. of Cal. *TT* 2: *SP* 2. May 1918 to Aug. 1919 Elec. Designer, U. S. Navy Yard, Mare Island, on low-tension distribution, radio, tele. installation, radio research. *TT* 1.2: *SP* 0.8: *P* 0.4: *RC* 0.4. Aug. 1919 to April 1920 Valuation Engr., Pacific Gas & Elec. Co., San Francisco, Cal., on valuation and classification of hydro-electric plants and substations. *TT* 0.6: *SP* 0.4: *P* 0.2: *RC* 0.2. April 1920 to Feb. 1921 Structural Designer, Foundation Co. (Standard Oil Co.), at Point Richmond, Cal., on concrete and structural steel design of mechanical shops. *TT* 0.8: *P* 0.8: *RC* 0.5: *D* 0.3. Feb. to Sept. 1921 Structural Designer, Robert T. Pollock Constr. Co. of San Francisco, on concrete design of structures for crude-oil refinery. *TT* 0.6: *P* 0.6: *RC* 0.2: *D* 0.4. Sept. 1921 to March 1922 Asst. Constr. Engr., Coast Constr. Co. of San Francisco, on construction of filtration plant at Sacramento, Cal. *TT* 0.5: *SP* 0.3: *P* 0.2: *RC* 0.1: *D* 0.1. March to Sept. 1922 Civ. Engr. (Asst.), California State Highway, Sacramento, design, drafting and survey. *TT* 0.6: *SP* 0.4: *P* 0.2: *RC* 0.2. Sept. 1922 to May 1923 Elec. Designer, Pacific Gas & Elec. Co., San Francisco, on design H. T. substations, D. C. generating stations, including switchboards and wiring. *TT* 0.8: *SP* 0.1: *P* 0.7: *RC* 0.4: *D* 0.3. May 1923 to Sept. 1924 Job Engr., Standard Oil Co., Point Richmond, Cal., on design and construction of installations, including steel storage tanks, concrete retaining walls, and steel and reinforced concrete still foundations. *TT* 1.3: *SP* 0.4: *P* 0.9: *RC* 0.4: *D* 0.5. Sept. 1924 to Sept. 1926 Asst. Hydr. Engr., California State Div. of Water Rights, investigating applications for water rights, stream flow measurements, underground water study. *TT* 2: *SP* 0.3: *P* 1.7: *RC* 1.7. Sept. 1926 to date Eng. Instructor (Asst. Prof.), Sacramento Junior Coll. *TT* 0.8: *P* 0.8. *TT* 11.2: *SP* 4.7: *P* 6.5: *RC* 4.1: *D* 1.6. Refers to E. N. Bryan, M. S. Edson, E. Hyatt, Jr., H. M. Stafford, W. E. Stoddard.

1014

(12) **THIEME, FRED ERNEST**, 403 Evans Ave., Missoula, Mont. (Age 37. Born Helena, Mont.) 1912 B. S. and C. E., Univ. of Mont. *TT* 2: *SP* 2. Summer 1907 Asst., Meter Testing Dept., and summer 1909 Trouble Shooter and Asst. Sub-Station Attendant, Missoula (Mont.) Light & Water Co. Summer 1908 Recorder and Rodman, topographic survey, U. S. Forest Service. Summer 1910 Instrumentman and Chf. of Party on General Land Office subdivision, Helena, Mont. June 1912 to date with U. S. Forest Service, Missoula, engaged as follows: June 1912-Jan. 1915 Chf. of Party on surveys; Feb. 1915-May 1919 Asst. Engr. in charge of cadastral survey division of Dist. Engr.'s office; June 1919-Sept. 1920 Asst. Dist. Engr., directing (under Dist. Engr.) road location and construction, cadastral and topographic surveys, water power investigations, etc., and designing highway bridge structures; since Sept. 1920 Dist. Engr., Dist. 1, in charge of engineering work on roads, water power, logging railroad, topographic and cadastral surveys, designing. *TT* 14.9: *P* 14.9: *RC* 11.6: *D* 0.6. *TT* 16.9: *SP* 2: *P* 14.9: *RC* 11.6: *D* 0.6. Refers to F. E. Bonner, J. C. Dort, H. W. Holmes, W. A. Lamb, O. C. Merrill, T. W. Norcross.

1015

(2) **THOMAS, GORDON EVAN**, 75 Foster St., Arlington, Mass. (Age 21. Born Los Angeles, Cal.) 1927 B. S., Mass. Inst. Tech. *TT* 2: *SP* 2. Refers to H. K. Barrows, C. M. Spofford.

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(1) **THOMAS, WESTON GAGE**, 39 West Twelfth St., New York City. (Age 24. Born Middletown, Ohio.) 1924 S. B. in Civ. Eng., Harvard Univ. *TT* 2: *SP* 2. 2 years (spare time while in high school) Asst., Dept. of Chemical Metallurgy, U. S. Bureau of Standards. Summer 1923 Asst. to Prof., Harvard Eng. Camp, instruction in surveying. Aug. 1924 to April 1927 Engr., New York Telephone Co., on engineering and economic cost studies, preparing fundamental plans for extension of telephone plant in New York City. *TT* 2.7: *P* 2.7: *RC* 2.7. April 1927 to date Engr., Jones & Laughlin Steel Corporation, New York City, sales, estimating, design and inspection. *TT* 0.3: *P* 0.3: *RC* 0.3: *D* 0.3. *TT* 5: *SP* 2: *P* 3: *RC* 3: *D* 0.3. Refers to C. Gilman, W. L. Hanavan, H. J. Hughes, L. J. Johnson, T. R. Kendall, F. Mason, R. Ridgway.

1017

(2) **THOMSON, FREDERICK MANN**, 513 Beacon St., Boston, Mass. (Age 29. Born Bowesmont, N. Dak.) 1923 B. S., Univ. of N. Dak. *TT* 2: *SP* 2. 1926 to 1927 Special Student, Massachusetts Inst. of Technology. *TT* 0.3: *SP* 0.3. June 1923 to Aug. 1926 Engr., Butler Bros. Min. Co., Cooley, Minn., mine surveying, inspection, exploration, etc. *TT* 3.1: *P* 3.1. *TT* 5.4: *SP* 2.3: *P* 3.1. Refers to W. M. Fife, C. M. Spofford.

1018

(8) **THUMLEY, JIM**, 2766 Garrison St., Evanston, Ill. (Age 44. Born Chicago, Ill.) Completed Bridge and Civ. Eng. courses at International Correspondence Schools. Studied and taught Structural Eng. at Chicago Technical Coll. and studied Eng. courses at Armour and Lewis Insts. Oct. 1901 to March 1904 detailing office building steel, until Feb. 1903 with E. C. & R. M. Shankland, then with Purdy & Henderson, Chicago, Ill. *TT 2.4: SP 2.4.* April 1904 to Sept. 1911 with American Bridge Co., Chicago, detailing and designing office building and bridge structures. *TT 7.5: SP 5: P 2.5.* Oct. 1911 to date with D. H. Burnham & Co., Graham, Burnham & Co., and (at present) Graham, Anderson, Probst & White, Chicago, designing, supervising design and (past 10 years) supervising erection and completion of power plants, factory, office and bank buildings, etc. *TT 15.8: P 15.8: RC 14.8: D 1.* *TT 25.7: SP 7.4: P 18.3: RC 14.8: D 1.* Refers to F. W. Dencer, H. R. Kingsley, P. M. Larsen, O. G. F. Randolph, I. F. Stern, G. H. Wilsey.

1019

(12) **TIFFANY, CHARLES AUSTIN**, Route 4, Box 257, Yakima, Wash. (Age 23. Born Vancouver, Wash.) 1927 B. S. in C. E., Wash. State Coll. Feb. to Sept. 1926 (while student) Chairman, State Highway Dept. of Washington, also (until June) structural drafting for Washington State Coll. Archt. April to June 1927 (about 2 weeks) Instrumentman, Washington State Coll. *TT 2: SP 2.* Refers to H. E. Phelps, O. L. Waller.

1020

(12) **TIPPY, KENNETH CLEM**, 603 North Pearl St., Ellensburg, Wash. (Age 22. Born Herrin, Ill.) 1927 B. S. in Civ. Eng., Univ. of Ill. *TT 2: SP 2.* Refers to H. Cross, J. J. Doland, T. D. Mylrea, G. W. Pickels, C. C. Wiley.

1021

(11) **TOLBERT, FRANCIS MARION**, 918 South Union Ave., Pueblo, Colo. (Age 22. Born Laurel, Miss.) 1927 B. S. in C. E., Univ. of Ala. Transitman, Colorado Fuel & Iron Co., Pueblo, Colo. *TT 2: SP 2.* Refers to G. J. Davis, Jr., S. C. Houser.

1022

(12) **TOMLINSON, CHARLES LAWRENCE**, 4522 Brooklyn Ave., Seattle, Wash. (Age 33. Born Dayton, Ohio.) 1922 B. S. E., and M. S. E., Univ. of Mich. *TT 2: SP 2.* March 1910 to April 1913 Apprentice Machinist and Toolmaker, W. P. Callahan Co., Dayton, Ohio. *TT 3: SP 3.* April 1913 to March 1914 Tool Designer and Draftsman, Kidder-Oswald Tool & Die Co., Dayton. *TT 0.9: SP 0.9.* April 1914 to Oct. 1916, May to Dec. 1917 and Jan. to Oct. 1919 Rodman, Levelman, Transitman and Topographic Draftsman, planetable work, Sewer Inspector and Draftsman, City Eng. Dept., Dayton. *TT 3.8: SP 2.5: P 1.3: RC 1.* July to Oct. 1918 Asst. Pilot Engr., Michigan Central R. R., on Interstate Commerce Comm. Valuation Survey, Detroit. *TT 0.2: P 0.2: RC 0.2.* Summer 1920 Asst. Instructor in Surveying, Summer School, Univ. of Michigan. Sept. 1922 to June 1923 Mathematics Instructor, Jackson (Mich.) High School. July 1923 to Dec. 1924 Draftsman on power-plant design, Sessions Eng. Co., consulting work on electrical installation for Long-Bell Lumber Co., Longview, Wash. *TT 1.4: SP 0.7: P 0.7: D 0.7.* Oct. 1921 to June 1922 student, Univ. of Michigan. *TT 0.7: P 0.7.* Dec. 1924 to April 1926 Asst. to Chf. Engr. on construction of power plant for Hammond Lumber Co., Samoa, Cal. *TT 1.8: P 1.8: RC 1.8.* April 1926 to date Bldg. Supt. for C. H. Bebb & C. F. Gould, Archts., on commercial and educational buildings, etc., assisting contractors. *TT 1.2: P 1.2: RC 1.2.* *TT 15.3: SP 9.3: P 6: RC 4.2: D 0.7.* Refers to L. M. Gram, J. F. Hale, W. C. Hoad, J. Jacobs, C. C. May, H. E. Riggs, V. C. Suckow.

1023

(13) **TRONOFF, THEODORE VERNON**, 2812 Ninth St., Berkeley, Cal. (Age 32. Born San Francisco, Cal.) Sept. 1914-Aug. 1916 Blueprinter in charge of blueprinting, photostating and map mounting, Sept. 1916 to Aug. 1917 Map Colorist-Draftsman, and Aug. 1917 to July 1918 Topographical Draftsman, U. S. Forest Service. *TT 3.7: SP 3.7.* July 1918 to March 1919 May Draftsman, Spreckels Sugar Co., compiling and tracing ranch maps, field work. *TT 0.8: P 0.8.* March to Sept. 1919 Draftsman with Ralph Barker and (after June) with Leland Rosener, Cons. Engrs., San Francisco, Cal., on structural tracing and detailing. *TT 0.6: P 0.6.* Nov. 1919 to April 1923 Asst. City Engr.-Chf. Draftsman, City of Santa Cruz, Cal., plans and specifications for street improvements, surveying. *TT 3.5: P 3.5: RC 2: D 0.3.* April to July 1923 Draftsman, County of Tulare, designing, drafting reinforced concrete bridge. *TT 0.2: P 0.2: D 0.2.* July 1923 to April 1924 Office Engr., Draftsman, City of Fresno, Cal., on street improvement plans and specifications. *TT 0.8: P 0.8: RC 0.4.* May to June 1924 Draftsman, California State Highway Comm. *TT 0.2: P 0.2.* Aug. 1924 to Jan. 1926 Office Engr., Draftsman, City of Berkeley, Cal., on street improvement plans and specifications, surveying and inspection. *TT 1.4: P 1.4: RC 0.7.* Feb. to Oct. 1926 Field and Office Engr., City of Santa Cruz, Cal.,

compiling data, drafting record water system maps. *TT 0.7: P 0.7: RC 0.7.* Nov. 1924 to date in private practice of municipal engineering, surveying, drafting, plans, specifications, estimating and inspection; 1 month on subdivision in Santa Cruz County, Cal. *TT 0.4: P 0.4: RC 0.4.* *TT 12.4: SP 3.7: P 8.7: RC 4.2: D 0.5.* Refers to H. I. Dygert, A. J. Eddy, H. Forbes, J. C. Foss, Jr., F. H. Fowler, H. A. Sedelmeyer.

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(15) **TROST, LOUIS FRED**, 21 North Birch St., Sapulpa, Okla. (Age 22. Born St. Louis, Mo.) 1927 B. S. in Eng., Univ. of Mo. Summer 1925 Chairman, and Summer 1926 Rodman, Frisco Ry. *TT 2: SP 2.* Refers to A. L. Hyde, H. A. LaRue, H. K. Rubey.

1025

(2) **TSAI, FANG-YIN**, Technology Dormitory, Cambridge, Mass. (Age 26. Born Nanchang, Kiangsi, China.) 1927 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Refers to C. M. Spofford, C. Terzaghi.

1026

(2) **TYNAN, JOHN WILLIAM**, Arlington, Vt. (Age 22. Born Rutland, Vt.) 1927 C. E., Rens. Pol. Inst. Summer 1924 Asst. to Supt. of Bldgs., Hale Co., Arlington, Vt., on construction and repair of buildings, bridges and dams. Summer 1926 Jun. Asst. Engr., New York State Dept. of Public Works, Bureau of Highways, on concrete highway planning, design and construction. *TT 2: SP 2.* Refers to E. R. Cary, L. W. Clark, H. B. Compton, T. R. Lawson, W. W. Rousseau.

1027

(1) **VALEGA, RAUL FELIX**, Peruvian Consulate, 42 Broadway, New York City. (Age 23. Born Lima, Peru.) 1927 B. S. in C. E., Catholic Univ. of America. *TT 2: SP 2.* Refers to J. W. Oehmann, A. J. Scullen.

1028

(1) **VALLE ZENO, RAFAEL DEL**, San Juan, Porto Rico. (Age 48. Born Arecibo, Porto Rico.) 1899 Civ. Engr. and Agronomical Engr., Univ. of Caracas, Venezuela. *TT 2: SP 2.* 1899 to 1903 with Public Works Dept., Porto Rico, until 1900 as Res. Engr. surveyed, located and supervised construction of Toa-Alta-Corozal Road (\$60 000), located new road Morovis-Ciales junction and designed Mavilla River Bridge (86 ft. concrete arch, \$40 000); 1900 to 1903 Chf. Engr., South Div. in charge of maintenance of roads and structures, of survey and construction of 56 Km. of roads, Guayama-Ponce, of location of new bridge over Portuguoz River, and inspection of franchise, public utilities, water irrigation, harbor and electric lines, etc. *TT 4: P 4: RC 3.* 1903 to 1920 in private practice as Designing and Constr. Engr., being member of firm, Del Valle Zeno Bros., Engrs. and Constrs., San Juan, made survey and constructed 22 km. railroad (\$180 000), bridges and other structures (\$100 000), in Sugar Central Monserrate, Manati, Porto Rico, designed and constructed sewage-disposal plant and acted as Engr. on construction for improvements, warehouses, etc., for Porto Rican American Tobacco Co., Bayamon, Porto Rico; made design and complete plans for water-works and sewers for Carolina, Yabucoa, Toa-Baja, Manati, etc. (over \$300 000); Engr. for design of hospitals, clubhouse, old race tracks, private buildings, etc., in San Juan, Rio Piedras, Manati, etc. (approx. \$450 000); Patillas Tunnel and partly constructed Patillas Dam for irrigation work; 1907 to 1911 also Engr. Member, Superior Board of Health. *TT 17: P 17: RC 17: D 10.* 1920 to date in private practice as Cons. Engr., principally on industrial works. *TT 6: P 6: RC 6: D 2.* *TT 29: SP 2: P 27: RC 26: D 12.* Refers to M. V. Domenech, M. Font, F. Levy Gonzalez, R. A. Gonzalez, C. del Valle Zeno.

1029

(7) **VAN de GREYN, MAX**, Box 113, Roseville, Mich. (Age 34. Born Grand Rapids, Mich.) 1924 B. S. E., Univ. of Mich. *TT 2: SP 2.* 1919 to 1923 Draftsman and Res. Engr., Michigan State Highway Dept. *TT 4: SP 1: P 3.* 1924 to 1926 Project Engr., Macomb County Road Comm., Mt. Clemens, Mich. *TT 2.1: P 2.1: RC 2.1.* 1926 to date Mgr. and Engr., Village of Roseville, Mich. *TT 0.8: P 0.8: RC 0.8.* *TT 8.9: SP 3: P 5.9: RC 2.9.* Refers to A. H. Blanchard, L. A. Doan, W. J. Lehner, H. E. Riggs, F. H. Stephenson, R. S. Swinton.

1030

(1) **VAN HULSTEYN, JOHN MAX CAREY**, Woolworth Bldg., New York City. (Age 31. Born Baltimore, Md.) 1918 B. S. in Eng., Johns Hopkins Univ. *TT 2: SP 2.* April 1917 to Dec. 1918 Ensign, Air Service, U. S. Navy, being Asst. to Engr. Officer, Naval Air Station, Sydney, N. S. *TT 1.7: SP 1.7.* April 1919 to March 1921 and May 1922 to June 1923 Rodman, Levelman, Transitman and Chf. of Party, Constr. Dept., U. S. Steel Corporation, Pittsburgh, Pa. *TT 2: SP 1: P 1.* March 1921 to May 1922 Asst. to Pitometer Engr., Conservation Div., Water Dept., Baltimore. *TT 1.1: P 1.1.* June 1923 to date Asst. Engr., New York and New Jersey Bridge and Tunnel Comms., New York City, being Heading Inspec-

tor and Shift Engr. on concrete and caisson sinking under compressed air. *TT 3.9: SP 1: P 2.9: RC 1.5. TT 10.7: SP 5.7: P 5: RC 1.5.* Refers to B. S. Bascome, M. I. Killmer, H. L. King, J. Mechanic, H. W. Read.

1031

(3) **VAN KLEECK, LeROY WINFIELD**, 19 Courtland Pl., Middletown, N. Y. (Age 22. Born Middletown, N. Y.) 1927 B. S. in C. E., Lafayette Coll. *TT 2: SP 2.* Refers to W. S. Lohr, L. Perry.

1032

(14) **VAN ZYVERDEN, ALBERT**, 801 West Capitol Ave., Little Rock, Ark. (Age 28. Born Amsterdam, Holland.) 1917 C. I., Univ. of Amsterdam, Holland. *TT 2: SP 2.* Took Civ. Eng. course at American School of Correspondence, Chicago, Ill. 1918 to 1922 Asst. Civ. Engr., Cultuur Maatschappij de Oostkust, Pabatoe, Teking Lingga, East Coast, Sumatra, Dutch East Indies, 6 months tracing, forest surveying, mapping, etc., 1 years with Civ. Engr. on road making and water-works, then had charge of work and completed 5 miles of gravel road between Badja Linggei and Dolok Merawan, designing culverts and bridges, computing watersheds, velocities of flow, drainage ditches, etc.; had charge of cutting and burning forest (approx. 1 000 acres), laid out several roads, designed buildings, etc. *TT 5: SP 3.5: P 1.5: RC 1.5.* 1923 to 1925 Civ. Engr., Compagnie des Tabacs du Cameroun, at Nyombe, Cameroun, West Africa, had charge of plantations at Nyombe and Penja, made survey, repaired roads, pumping station, water pipes, railroad, buildings, barns, fermentation houses and bridges. *TT 2.4: P 2.4: RC 2.4.* 1925 to 1926 (2 years) Salesman; 1926 to 1927 Civ. Engr., with Hugh R. Carter, Little Rock, Ark., had charge of laying of sewer line (7 000 ft.) computed area watershed and drainage ditch in Atkins, Ark., made tracing maps, plans, surveyed city streets for paving. May 1927 to date Civ. Engr., State Highway Dept., Little Rock. *TT 0.5: P 0.5: RC 0.2. TT 9.9: SP 5.5: P 4.4: RC 4.1.* Refers to H. R. Carter, W. D. Dickinson, N. B. Garver, O. L. Hemphill, N. G. Tayman.

1033

(1) **VELU, SADRAS SHANMUKHAM**, 12/48 Barr St., Rangoon, Burma, India. (Age 45. Born in Madras Presidency, India.) 1908 to 1925 with J. W. Madeley, until 1912 as Head Surveyor first at Madras City drainage works, one year surveying and leveling, etc., and one year designing sewers, pumping stations, open channels to carry sewage to sewage farm in Casi-Modu, then at Madras City Water-Works, one year designing and one year setting out, supervising construction and checking measurements on pumping stations (12 000 gal. per minute), brick chimney (150 ft. high) and steel elevated tank (1 500 000 gal.); 1912 to 1913 (1 year) Supervisor, Madras City new sewage farm scheme, on investigations, plans, quantities, reports, etc.; 1913 to 1920 Supervisor in charge of drawing office, checking drawings and quantities, and final bill measurements of works in field for Madras City drainage, water, anti-malaria and storm-water drainage and sewage-disposal works; 1920 to 1921 Asst. Engr. (Acting) in charge of Madras City anti-malaria and storm-water drainage construction of triplicate area; after 1921 Supervisor in charge of drawing office preparing schemes and supervising special construction works. *TT 17: P 17: RC 11: D 5.* 1925 to 1926 Asst. Engr., Water and Sewer Dept., Corporation of Rangoon, in responsible charge of work and drawing section. *TT 1.5: P 1.5: RC 1.5. TT 18.5: P 18.5: RC 12.5: D 5.* (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

1034

(15) **VICKERY, AL BERGIN**, 3783 Oakland Ave., Ft. Worth, Tex. (Age 26. Born Wills Point, Tex.) June 1919 to June 1920 student, Univ. of Texas. *TT 0.3: SP 0.3.* June 1920 to date with Eng. Dept., Ft. Worth, Tex., until Dec. 1920 as Rodman and Chainman, then Draftsman on street and sanitary sewer profiles, street cross-sections and grades for paving, drainage systems, sewage-disposal, and filtration plants, bridges and subways, design of storm sewers, surveys, etc., and since Feb. 1924 Office Engr. in charge of draftsmen, design, records, etc. *TT 6.8: SP 1.5: P 5.3: RC 1.2: D 1. TT 7.1: SP 1.8: P 5.3: RC 1.2: D 1.* Refers to O. E. Carr, J. D. Johnson, W. O. Jones, D. L. Lewis, D. C. Lipscomb, W. M. Powell, T. A. Van Amburgh.

1035

(12) **VINCENT, RUSSELL**, 5015 Seventeenth Ave. N. E., Seattle, Wash. (Age 24. Born Spokane, Wash.) Oct. 1921 to June 1922, Jan. 1924 to June 1925 and Oct. 1926 to June 1927 student, C. E. Dept., Univ. of Washington. *TT 1: SP 1.* Oct. 1922 to Feb. 1923 Chainman and Instrumentman, Associated Oil Co., Seattle, Wash., on plant construction. *TT 0.4: SP 0.4.* April 1923 to Jan. 1924 Chainman, Chicago, Milwaukee & St. Paul Ry. Aug. 1926 to June 1927 (while student) Draftsman, Puget Sound Title Insurance Co., Seattle, on property maps. *TT 0.8: SP 0.8. TT 2.2: SP 2.2.* Refers to W. F. Allison, I. L. Collier, J. B. Hamilton, C. W. Harris, A. J. McNeil, C. C. Mora, J. F. Pinson.

1036

(11) **VOSTEEN, FRED HENRY**, 3854 Forty-Fourth St., San Diego, Cal. (Age 26. Born Oelwein, Iowa.) 1925 B. S. in C. E., Ore. State Agri. Coll. *TT 2: SP 2.* June 1925 to Oct. 1926 with Eng. Dept., Southern Pacific Co., until Aug. 1925 as Eng. Stenographer, on progress reports, etc., then Estimateman, estimating grading, tunneling, tunnel timber, masonry and bridge steel, sketching and measuring masonry structures and checking tracings. *TT 1.3: SP 1.3.* Nov. 1926 to Jan. 1927 Subdivision Computer and Draftsman, Waterman Eng. Co., San Diego, Cal., on property development of La Jolla Properties, Inc., mapping, laying out streets, blocks and lots, calculations and grading estimates. Jan. 1927 to date Head Officeman on same work, under Frank E. Dodge, C. E., in charge of drafting and computing for streets, grades, lots and sewer and water systems, paving, construction progress maps and reports, some field work. *TT 0.6: SP 0.6. TT 3.9: SP 3.9.* Refers to L. E. Brigham, F. E. Dodge, M. R. McColloms, S. H. Sims, J. J. Sorenson.

1037

(8) **WALLACE, ROBERT SMITH**, 134 North La Salle St., Chicago, Ill. (Age 36 Born Chicago, Ill.) 1912 completed engineering course, American School of Correspondence. May 1914 to Jan. 1916 Asst. to Julius Floto, Chicago, Ill., laying out and designing educational and commercial buildings; had responsible charge of design and construction. *TT 1.7: P 1.7: RC 1.7: D 1.7.* Jan. 1916 to June 1917 Chf. Engr. for State Archt. of Illinois, in charge of design, construction and supervision of state buildings. *TT 1.5: P 1.5: RC 1.4: D 1.4.* June 1917 to Nov. 1923 Chf. Engr. for Coolidge & Hodgdon, Chicago, in charge of engineering design, superintending and specifications of educational buildings, churches and residences. *TT 6.4: P 6.4: RC 6.4: D 6.4.* Nov. 1923 to date member of firm, Morrison & Wallace, Archts. and Engrs., Chicago, in charge of architectural engineering, specifications and supervision. *TT 3.5: P 3.5: RC 3.5: D 3.5. TT 13.1: P 13.1: RC 13: D 13.* Refers to F. D. Chase, A. R. Lord, E. S. Nethercut, E. Ottoman, Jr., F. A. Randall.

1038

(15) **WALTON, ALEXANDER YOUNG**, 418 Gunter Bldg., San Antonio, Tex. (Age 61. Born Gay Hill, Tex.) 1882 to 1884 Rodman, Levelman and Inspector on levees, Mississippi River Comm. Louisiana and Arkansas. *TT 1.5: SP 1.5.* 1903 to 1904 Highway Engr., Bexar County, Tex., building roads and bridges. *TT 1: P 1: RC 1.* 1911 to 1913 Asst. Engr., Medina Valley Irrigation Co., on preliminary canal surveys and topography. *TT 1.6: P 1.6: RC 1.6.* 1913 to 1917 in private practice, located and built Medina Lake Toll Road. *TT 1: P 1: RC 1.* 1917 to 1919 Battalion Commander, 106th and 219th Engrs., U. S. Army. *TT 1.5: P 1.5: RC 1.5.* 1921 to 1924 Highway Engr., Medina County, Tex., on roads and bridges (\$800 000). *TT 3.6: P 3.6: RC 3.6.* 1924 to date general engineering, including city and ranch subdivisions, surveying and irrigation; subdivided, Catarina Ranch (125 000 acres), Dimmit County, Tex. *TT 3.5: P 3.5. TT 13.7: SP 1.5: P 12.2: RC 8.7.* Refers to E. P. Arneson, H. Helland, C. H. Kearny, C. E. McCashin, A. J. McKenzie, A. P. Rollins.

1039

(2) **WARD, ELLWOOD WARREN**, Cordanille Road, Southboro, Mass. (Age 21. Born Faneuil, Mass.) 1927 B. S., Mass. Inst. Tech. Summers 1924 and 1925 Asst. to Town Engr., Wellesley, Mass., acting as Chainman, Rodman, and Transitman, and on office work. Summer 1926 office work, calculations and lotting, Lucerne-In-Maine Community Association. *TT 2: SP 2.* Refers to J. B. Babcock, 3d, F. A. Barbour, C. B. Breed, C. M. Spofford, R. G. Tyler.

1040

(10) **WARD, JOHN POWELL**, St. Lucie Hotel, Stuart, Fla. (Age 23. Born Cordele, Ga.) 1925 B. S. in C. E., Ga. School Tech. *TT 2: SP 2.* June to Dec. 1925 Chf. of Party for Butler, Barnett and Taylor, West Palm Beach, Fla., surveys, subdivisions and highway location. *TT 0.5: SP 0.5.* Dec. 1925 to July 1926 Res. Engr. Palm Beach County on highway construction in the Everglades. *TT 0.6: SP 0.6.* Nov. 1926 to Feb. 1927 Chf. of Party and Inspector, City of West Palm Beach, municipal work. *TT 0.3: SP 0.3.* Feb. 1927 to date Chf. of Party for A. F. Harley, Cons. Engr., on topographical surveying. *TT 0.3: SP 0.3. TT 3.7: SP 3.7.* Refers to C. H. Ruggles, F. C. Snow, A. O. Taylor.

1041

(10) **WARREN, RAY**, Municipal Bldg., Greensboro, N. C. (Age 30. Born Washington, N. C.) 1919 U. S. Mil. Acad., West Point, N. Y. *TT 2: SP 2.* Feb. 1919 to Jan. 1920 with The Washington-Beaufort Land Co., Washington, N. C., successively as Chainman, Rodman, and Instrumentman in charge of party on survey work. *TT 0.9: SP 0.9.* May 1921 to Aug. 1922 with City of Washington, until Aug. 1921 as Engr. Inspector on street construction, paving, storm drainage, sanitary sewer and water lines and appurtenances, then Asst. City Engr. in responsible charge of construction of improved street paving, including storm and sanitary sewers, water mains and culverts, also responsible for estimates and assessments. *TT 1.3: SP 0.3: P 1: RC 1.* Aug. 1922 to date with City of Greensboro, N. C., until July

1924 as Engr. and Inspector, Highways Dept., on paving, storm sewers and culverts, part of time preparing estimates, assessments and drafting; July 1924 to Aug. 1925 Asst. Highways Engr. in responsible charge of improved street paving and construction of storm sewers and concrete culverts; since Aug. 1925 Highways Engr., in charge of all work of Dept., reporting to City Mgr.; work includes design and supervision of construction of street paving (15 miles annually), with storm sewers; supervision of railway grade-crossing elimination, involving construction of 14 major projects underpassing or overpassing main line of Southern R. R. (estimated cost \$1 700 000) (two completed). *TT 4.8: SP 1.9: P 2.9: RC 1: D 1.9. TT 9: SP 5.1: P 3.9: RC 2: D 1.9.* Refers to H. S. Battie, R. M. Cooksey, G. E. Finck, F. T. Miller, P. C. Painter, C. W. Smedberg.

1042

(8) **WATTS, JOSEPH CLYDE**, Y. M. C. A., Oak Park, Ill. (Age 22. Born Cheyenne, Wyo.) 1927 B. S. and A. B., Univ. of Ill. *TT 2: SP 2.* Refers to H. Cross, H. H. Jordan, N. D. Morgan, L. H. Provine, Z. E. Severson.

1043

(14) **WEEKS, LUCAS ALFRED**, 415 Holland Bldg., Springfield, Mo. (Age 40. Born Denison, Iowa.) June 1903 to June 1910 Chairman, Rodman and Transitman, St. Louis-San Francisco Ry. Co. *TT 6.7: SP 6.7.* June 1910 to March 1911 Supt., J. W. Maxey Co., in charge of placing gravel macadam on Summer Hill Road in Bowie County, Tex. *TT 0.7: P 0.7: RC 0.7.* March 1911 to March 1912 Transitman, Kansas City Southern Ry. Co. *TT 1: P 1.* March 1912 to Sept. 1913 Supt., Hedges Constr. Co. on $3\frac{1}{2}$ miles of concrete conduit for water supply to City of Ft. Worth, Tex. *TT 1.5: P 1.5: RC 1.5.* Sept. 1913 to Sept. 1914 with Hannan-Hickey Bros. of St. Louis, Mo., in charge of bending and placing reinforcing steel for North Main St. Viaduct over Trinity River at Ft. Worth. *TT 1: SP 1.* Sept. 1914 to June 1915 Asst. Engr., Thomas Harmon & Hickey Bros., on levee work along Mississippi River at Helena, Ark. *TT 0.7: P 0.7.* June 1915 to date (except Nov. 1917 to May 1919 with Co. F, 23d Engrs., U. S. Army) with Hedges-Weeks Constr. Co., as Supt., and since June 1925 Vice-Pres. and Treas., building concrete bridges, culverts, structures, substructures, etc. for railroads and highways, concrete subways, retaining and brick pavement on East approach to Harahan Bridge, Memphis, Tenn., concrete pavement in Springfield, Mo., etc. *TT 12: P 12: RC 10.3. TT 23.7: SP 9.4: P 14.3: RC 12.6.* Refers to R. G. Alexander, J. H. Brookling, J. S. Hazelton, F. G. Jonah, H. P. Mobberly, R. Owen, E. P. Weatherly.

1044

(1) **WEINMAN, IRVING MARTIN**, 619 West 142d St., New York City. (Age 23. Born New York City.) B. S., Coll. of City of N. Y. 1926 C. E., Cornell Univ. *TT 2: SP 2.* March to Nov. 1926 Asst. Supt. and Supt., subway station construction, alteration and finish, planned and supervised construction of B. M. T. Station. *TT 0.7: SP 0.4: P 0.3.* Nov. 1926 to date Engr., Leonard Paving Co., Contr., detailing and ordering all special materials from plans, supervising construction in field, reporting, etc., New Jersey Plaza, Holland Tunnel, Contr. No. 26, New York and New Jersey Int. Bridge and Tunnel Comm. *TT 0.5: P 0.5. TT 3.2: SP 2.4: P 0.8.* Refers to F. A. Barnes, R. E. Goodwin, F. O. X. McLoughlin, C. Meads, C. D. Pollock, C. L. Walker.

1045

(6) **WESSENAUER, GABRIEL OTTO**, 546 Hill St., Sewickley, Pa. Graduating student awarded Pittsburgh Section Prize. (Age 20. Born Sewickley, Pa.) 1927 B. S. of C. E., Carnegie Inst. Tech. Summer 1924 Surveyman, Borough of Sewickley, Pa., acted as Rodman, Chainman and Draftsman. Summer 1926 Surveyman, U. S. Engr. Corps, Pittsburgh, on hydraulic computation and compilation of flood data, and some work with current meter measurement. *TT 2: SP 2.* Refers to F. M. McCullough, C. B. Stanton.

1046

(9) **WEST, BAIRD FELTUS**, 1125 Maple Ave., Terre Haute, Ind. (Age 22. Born Terre Haute, Ind.) 1927 B. S., Rose Pol. Inst. *TT 2: SP 2.* Refers to R. E. Hutchins, R. L. McCormick.

1047

(10) **WEST, MERRILL LORAIN**, 823 Hay St., Fayetteville, N. C. (Age 21. Born Philadelphia, Pa.) 1927 B. S. in C. E., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, H. F. Janda.

1048

(1) **WESTERHOFF, RUSSELL POST**, 823 East Twenty-Third St., Paterson, N. J. (Age 22. Born Paterson, N. J.) 1927 B. S., Mass. Inst. Tech. Summers 1924 and 1926 with County Engr., Passaic County, N. J., as Engr.'s Asst. acting as Chainman, Rodman, etc. (1924) and Instrumentman (1924). *TT 2: SP 2.* Refers to J. B. Babcock, 3d, H. K. Barrows, C. B. Breed, W. M. Fife, C. M. Spofford.

1049

(10) **WHEELER, ROBERT MARRET**, 1412 Seventeenth Ave. South, Nashville, Tenn. (Age 21. Born Ridgway, Pa.) 1927 B. E., Vanderbilt Univ. *TT 2: SP 2.* Refers to F. J. Lewis, W. H. Schuerman, E. B. Wilkinson.

1050

(1) **WHIPPEN, LEONARD SWAN**, 205 Washington St., Bloomfield, N. J. (Age 36. Born St. Albans, Vt.) 1913 B. S. in Civ. Eng., Tufts Coll. *TT 2: SP 2.* June 1913 to June 1917 and July to Dec. 1919 Detailer and Checker, American Bridge Co., Trenton, N. J., shop drawings for structural steel for bridges, buildings, subways, elevated railways, etc. *TT 4.5: SP 1: P 3.5.* June 1917 to June 1919 2d Lieut. and 1st Lieut., 104th Engrs., U. S. Army. *TT 2: P 2: RC 2.* Dec. 1919 to June 1921 Structural Designer, and Aug. to Oct. 1922 Designer, J. G. White Eng. Corporation, making and checking designs of structural work for industrial buildings. *TT 1.7: P 1.7: RC 1.7: D 1.7.* Aug.-Dec. 1921 Draftsman with George L. Watson, New York City, making drawings for sewerage system of Clifton, N. J. *TT 0.4: SP 0.4.* Jan.-April 1922 Draftsman, Viele, Blackwell & Buck, New York City on drawings, for a proposed steam power plant. *TT 0.3: SP 0.3.* April to Aug. 1922 Designer of floor construction with metal lumber, National Bridge Works. *TT 0.3: P 0.3.* Oct. 1922 to date Structural Designer, McClellan & Junkersfeld, Inc., designing and checking design for power plant and industrial building structures. *TT 4.5: P 4.5: RC 4.5: D 4.5.* *TT 15.7: SP 3.7: P 12: RC 8.2: D 6.2.* Refers to B. H. Ackerman, R. W. Atwater, S. R. Jones, A. MacGlashan, S. A. Roake, E. H. Rockwell, J. E. Tonneller.

1051

(6) **WHYTE, CLIFFORD RIDDLE**, 755 Brookline Boulevard, Brookline, Pittsburgh, Pa. (Age 38. Born Washington, D. C.) 1912 E. M., Lehigh Univ. *TT 2: SP 2.* March to Sept. 1910 and summers 1911 and 1912 Rodman, Engr. Dept., District of Columbia, on instrument work, drafting, computations and inspection. *TT 0.2: SP 0.2.* Sept. 1912 to July 1913 with Ray Consolidated Copper Co., Ariz., as Car Checker, Sampler and Laborer. *TT 0.8: SP 0.8.* Aug. 1913 to April 1921 with Bridge Div., District of Columbia, successively as Rodman, Draftsman, Transitman in charge of field party on construction and (after March 1917) Asst. Engr. on design and supervision of field work on bridges, wharves, walls, etc.; 1 year with U. S. Army. *TT 7.6: SP 4.5: P 3.1: RC 3.1.* April 1921 to Sept. 1926 Associate Highway Bridge Engr., U. S. Bureau of Public Roads, on review of plans, specifications and some design on highway bridges, etc. *TT 5.4: P 5.4: RC 5: D 0.4.* Sept. 1926 to date Asst. Designing Engr., on steel and concrete bridges, Bureau of Bridges and Structures, Pittsburgh, Pa. *TT 0.8: P 0.8: D 0.8.* *TT 16.9: SP 7.6: P 9.3: RC 8.1: D 1.3.* Refers to C. B. Hunt, E. F. Kelley, D. E. McComb, J. V. McNary, A. E. Phillips.

1052

(4) **WILKINSON, WILLIAM MacILHENNY**, 1505 Race St., Philadelphia, Pa. (Age 39. Born Philadelphia, Pa.) 1910 C. E., Rens. Pol. Inst. *TT 2: SP 2.* June 1910 to date (except March 1918 to Jan. 1919 Superv. Engr., Bureau of Yards and Docks, Navy Dept., Washington, D. C.) with M. Ward Easby and M. Ward Easby, Inc., Philadelphia, Pa., Promotors, Designers and Constructors of industrial plants, including installation of their mechanical equipment, until June 1916 prepared plans and specifications and on erection, from June 1916 to March 1918 and Jan. 1919 to July 1925 Treasurer, and since July 1925 Pres., first few years on drafting, etc., in connection with planning of buildings, also on field work, and past 8 years on design and construction, in charge of work; work of firm included boiler plants (150 to 500 h. p.), concrete, reinforced concrete, steel and slow burning construction (nearly 500 000 sq. ft.) for Edgewater Dyeing & Finishing Co. (1910 to 1915), Adams & Westlake Co. (1911), A. Holmes & Sons (1916 to 1922), Walther Mfg. Co. (1917), Windsor Mfg. Co. and Griffin Co. (1920), Beswick & Clay Co. (1923) and Eugene Carraine (1926), warehouse, Penna. Door & Sash Co. (1924); also (since 1910) all construction and plant alteration work (over \$1 000 000) for Ajax Metal Co., including pile and open caisson foundations, concrete wall (1 000 ft. long) on Delaware River, installation of machinery, etc. *TT 16.9: SP 2: P 14.9: RC 14.9: D 8.4.* *TT 18.9: SP 4: P 14.9: RC 14.9: D 8.4.* Refers to M. W. Easby, B. Franklin, W. E. Hamilton, G. R. Kurrie, P. M. Sax, E. E. Seyfert, J. H. Terry.

1053

(2) **WILLIAMS, HOWARD JAMES**, 44 School St., Boston, Mass. (Age 32. Born Kingston, Ont., Canada.) 1917 B. S., Queens Univ. 1920 M. S., Mass. Inst. Tech. *TT 2: SP 2.* April to Nov. 1917 with Cedar Rapids Power Co., Cedars, Que., Canada, successively as Rodman and Instrumentman. *TT 0.5: SP 0.5.* Nov. 1917 to Oct. 1919 with Hydro Elec. Power Comm. of Ontario on Chippawa-Queenston Power Development, until April 1918 as Field Draftsman, then Inspector on concrete arch bridge, and after July 1918 Instrumentman in charge of party laying canal and structures. *TT 1.9: SP 0.6: P 1.3.* Oct. 1919 to

June 1920 graduate student, Massachusetts Inst. of Technology. *TT 0.7: P 0.7.* June 1920 to Feb. 1923 Asst. Engr., Maine Water Power Comm., Augusta, Me., studying and reporting water-power resources of the State, with preliminary designs of future developments of power and storage. *TT 2.7: P 2.7: RC 2.7.* March to April 1923 Asst. with John F. Vaughan, Cons. Engr., Boston, on studies of effect of proposed reservoirs on stream flow. *TT 0.1: P 0.1.* April 1923 to July 1926 Asst. Engr., Designing Div., Water Supply Board, Providence, R. I., on design of structures for Scituate reservoir, aqueduct, distribution reservoirs and mains, acting as Squad Boss on some designs; studies for valuations of condemned mills and water powers. *TT 3.2: P 3.2: RC 1: D 2.2.* July 1926 to date Asst. Engr. with Fay, Spofford & Thorndike, Cons. Engrs., Boston, on design of high earth dam and reservoir, investigations, designs and reports on water supply, water power, sewerage, etc. *TT 1: P 1: RC 0.5: D 0.5.* *TT 12.1: SP 3.1: P 9: RC 4.2: D 2.7.* Refers to H. K. Barrows, A. C. D. Blanchard, C. A. Farwell, F. H. Fay, W. W. Peabody, C. M. Spofford, F. E. Winsor.

1054

(14) WILLIER, THOMAS EDWARD, 430 Poplar St., Springfield, Mo. Graduating student awarded St. Louis Section prize. (Age 22. Born Springfield, Mo.) 1927 B. S. in C. E., Washington Univ. *TT 2: SP 2.* Refers to W. J. Gray, H. P. Mobberly, E. O. Sweetser, J. L. Van Ornum.

1055

(9) WILLIS, CHARLES LEYTON, Jr., Riverside Hall, Gary, Ind. Graduating student awarded Central Illinois Section prize. (Age 23. Born Little Rock, Ark.) 1927 B. S. of C. E., Univ. of Ill. Summer 1926 Student Engr., South Western Bell Tel. Co., Little Rock, Ark., on design of wire and cable systems. At present with American Bridge Co., Gary, Ind. *TT 2: SP 2.* Refers to H. Cross, J. J. Doland, W. C. Huntington, T. D. Mylea, G. W. Pickels, C. C. Wiley.

1056

(4) WITMER, JOHN DONALD, 5 Juniata St., Lewistown, Pa. (Age 21. Born Sunbury, Pa.) 1927 B. S. in C. E., Pa. State Coll. *TT 2: SP 2.* Refers to R. O'Donnell, E. D. Walker.

1057

(15) WOLFF, ALLAN LEOPOLD, Union Indemnity Bldg., New Orleans, La. (Age 29. Born New Orleans, La.) 1917 B. S. in C. E., Tulane Univ. *TT 2: SP 2.* 1917 to 1921 (except 1918) Asst. Supt., Lane Cotton Mills, responsible for production, etc., also Research Laboratory. *TT 3: P 3: RC 2.* 1918 successively Private, Corporal Sergeant and 2d Lieut., Eng. Corps, U. S. Army. At present 1st Lieut., Engr. Reserve Corps. *TT 1: P 1: RC 1.* 1921 to 1925 City Sales Mgr., Country Sales Mgr., and Asst. to Pres., Interstate Elec. Co., Jobbers. *TT 4: P 4: RC 4.* 1925 to 1926 Pres. and Gen. Mgr., Owl Battery Co., Owners and Operators of Radiocasting Station, operated storage battery manufacturing plant. *TT 1: P 1: RC 1: D 1.* 1926 to date Asst. Chf. Engr., Standard Fruit & Steamship Corporation, Owners of Banana Co., hotels, Central American properties, breweries, ice plants, etc., on design and acted as Consultant. *TT 1: P 1: RC 1: D 1.* *TT 12: SP 2: P 10: RC 9: D 2.* Refers to D. Derickson, J. P. Ewin, W. B. Gregory, B. H. Grehan, W. T. Hogg, R. H. Mann, F. A. Muth, C. H. Stem.

1058

(13) WOLFSKILL, KENNETH BARNETT, 1921 Fifty-First Ave., Oakland, Cal. (Age 21. Born Alameda, Cal.) 1927 B. S., Univ. of Cal. *TT 2: SP 2.* March to Aug. 1923 Draftsman and Rodman, East Bay Water Co., on Upper San Leandro Reservoir. *TT 0.7: SP 0.7.* Summer 1924 Rodman and Levelman, Hetch Hetchy Water Supply, on transmission line. Summer 1925 Chainman, Sugar Pine Lumber Co., on logging railroad location, and Timekeeper, Utah Constr. Co., on tunnel construction. Summer 1926 Transitman on surveys, and May 1927 to date Hydrographer on stream gauging, Sutter Butte Canal Co. *TT 0.3: SP 0.3.* *TT 3: SP 3.* Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, C. G. Hyde, N. Ware.

1059

(12) WOOD, WILLIAM DOUGLAS, U. S. Bureau of Reclamation, Augusta, Mont. (Age 23. Born Stoughton, Wis.) 1927 B. S. in C. E., Univ. of Colo. *TT 2: SP 2.* Refers to F. R. Dungan, C. L. Eckel, H. J. Gilkey.

1060

(10) WOODBURY, WILLIAM NICOLL, Care, Virginia Bridge & Iron Co., Birmingham, Ala. (Age 41. Born Knoxville, Tenn.) 1906 Ph. B., Sheffield Sci. School. *TT 2: SP 2.* Sept. 1906 to Aug. 1910 Draftsman, successively with Experimental Dept., Parlin & Orendorff Co., Canton, Ill., tracing and detailing farm implements, with U. S. Coal & Coke Co., Gary, W. Va., designing mine structures, houses, stores, coke ovens, steelwork, timber and concrete, also map work, etc., and with Structural Dept., Cambria Steel Co., Johnstown, Pa., detailing, checking and designing steel structures, buildings and bridges. *TT 3.9: SP 2.9: P 1: D 1.* Aug. 1910

to June 1918 with Virginia Bridge & Iron Co., Roanoke, Va., as Draftsman, and Squad Leader in drafting room in charge of steel details for building work. *TT 7.8: P 7.8: RC 7: D 2.* June 1918 to Aug. 1919 with Mobile Shipbuilding Co., until Dec. 1918 as Draftsman in New York City, checking steel details for ships, then Structural Engr. in Mobile, Ala., Engr. in charge of and supervising detail steel drawings. *TT 1.2: SP 0.5: P 0.7: RC 0.7.* Aug. 1919 to Oct. 1921 Chf. Engr., Birmingham Steel Corporation, in charge of sales and engineering for structural (fabricating) shop. *TT 2.2: P 2.2: RC 2.2: D 1.* Nov. 1921 to May 1926 Mgr., Structural Dept., Austin Bros. Bridge Co., Atlanta, Ga., in charge of sales, engineering and production for structural (fabricating) shop. *TT 4.5: P 4.5: RC 4.5: D 2.* May 1926 to date Div. Engr., Virginia Bridge & Iron Co., in charge of estimating, designing and drafting at Birmingham Plant. *TT 1: P 1: RC 1: D 0.5. TT 22.6: SP 5.4: P 17.2: RC 15.4: D 6.5.* Refers to C. Berry, P. A. Blackwell, A. J. Dyer, R. S. Fiske, L. H. Miller, W. C. Spiker, G. A. Tretter, D. H. Wood.

1061

(10) **WRIGHT, ALLEN VINSON**, 324 College St., Macon, Ga. (Age 21. Born Macon, Ga.) 1927 B. S. in C. E., Ga. School Tech. *TT 2: SP 2.* Refers to R. P. Black, F. C. Snow.

1062

(10) **WRIGHT, AUSTIN ROABER**, Box 554, Fayetteville, N. C. (Age 20. Born Selma, Ala.) 1927 B. S. in C. E., Univ. of N. C. *TT 2: SP 2.* Refers to G. M. Braune, H. F. Janda.

1063

(1) **YALE, DAVID**, 416 West 118th St., New York City. (Age 27. Born New York City.) 1920 to 1923 student, Coll. of Eng., Cornell Univ. *TT 1: SP 1.* Oct. 1923 to Dec. 1924 Jun. Asst. Engr., successively with New York State Transit Comm., acting as Chf. of Party on subway construction and (after May 1924) Bureau of Highways, and on office computations, and field work on concrete construction. *TT 1.1: P 1.1: RC 0.6.* Dec. 1924 to March 1927 Supt., R. W. Hebard & Co., on railway and highway construction, in charge of grade, masonry, concrete and transportation, also location and railroad maintenance. *TT 2.2: P 2.2: RC 2. TT 4.3: SP 1: P 3.3: RC 2.6.* Refers to R. C. Hardman, E. B. Karnopp, S. F. Shaw, H. C. Willcox, W. F. Wirth.

1064

(12) **YOUNG, DONOVAN HAROLD**, P. O. Box 606, Wenatchee, Wash. (Age 23. Born Kooskia, Idaho.) 1927 B. S. in C. E., State Coll. of Wash. Summer 1926 Rodman, State Highway Dept. Sept. 1925 to June 1926 and Feb. to June 1927 Asst. Instructor in field classes in surveying, Washington State Coll. *TT 2: SP 2.* Refers to H. E. Phelps, O. L. Waller.

1065

(3) **ZEGLER, RUDOLPH THOMAS**, 765 Eastern Ave., Schenectady, N. Y. (Age 23. Born Schenectady, N. Y.) 1927 B. S. in C. E., Union Coll. At present Jun. Highway Engr., U. S. Dept. of Agriculture, Bureau of Roads, Dist. No. 9, Troy, N. Y. *TT 2: SP 2.* Refers to H. Miller, W. C. Taylor.

1066

(1) **ZWANZIGER, DAVID MENDEL**, 880 Eighth Ave., New York City. (Age 28. Born Przemyśl, Poland.) 1923 B. S., Coll. of City of N. Y. 1926 C. E., Pol. Inst. of Brooklyn. *TT 2: SP 2.* June 1925 to date Cost Estimator, Heyman & Goodman Co., Inc., Gen. Contrs., New York City. *TT 1.8: SP 1.8. TT 3.8: SP 3.8.* Refers to J. J. Durfee, C. Goodman, R. W. Greenlaw, W. Heyman, I. J. Stander.

FOR TRANSFER

FROM THE GRADE OF ASSOCIATE MEMBER

1057

(3) **BAKER, HAROLD WALLACE**, Assoc. M., 54 Court St., Rochester, N. Y. (Elected Junior March 5, 1912; Assoc. M. May 13, 1918.) (Age 38. Born Oneida, N. Y.) Licensed Prof. Engr. and Land Surveyor, State of New York. 1911 B. E. in Civ. Eng., Union Coll. *TT 2: SP 2.* July to Sept. 1910 in charge of survey of slips, Buffalo Harbor, soundings, etc., Western Terminal Barge Canal. July 1911 to May 1912 Asst. Engr., Coleman du Pont Rd., Georgetown, Del., plans and estimates, 18 miles of road, design of concrete bridges, culverts, etc., including design and supervision of construction of concrete bridge in cofferdams (\$7 000); Chf. of party staking out work and supervising construction. *TT 0.8: P 0.8: RC 0.8: D 0.8.* May 1912 to Jan. 1915 with New York State Barge Canal, until Feb. 1913 as Rodman and Draftsman staking out work and preparing estimates on construction of

feeder, then Draftsman and Asst. Engr. on Contract 37, construction of two locks, two dams (500 ft. long), two bulkheads with gates 180 ft. long, retaining walls, dikes, excavation in coffer dams and dredging; charge of office work under Asst. Engr. in charge contract, estimates, etc. *TT 2.6: P 2.6: RC 1.8: D 1.8.* March to May 1915 Asst. Engr., Borough of Troy, Pa., construction of sanitary sewer system with septic-disposal plant (\$22 000), charge of party staking out work, inspection, estimates, etc. (under Res. Engr.), in charge of work. *TT 0.2: P 0.2: RC 0.2.* May 1915 to Jan. 1918 Asst. Engr., New York State Highway Dept., Rochester, N. Y., Div. 7, charge of contracts for 15½ miles of macadam and concrete pavement (total over \$180 000); in charge of survey party on about 7 miles of highway; 1917 Maintenance Engr., in charge of about 175 miles of roads in Monroe County East (about \$30 000). *TT 2.7: P 2.7: RC 2.7: D 2.7.* Jan. 1918 to Jan. 1919 Engr., Symington Anderson Co., ordnance design and laying out heat-treatment plant, electric furnace pits, furnace operating machinery, furnace details, etc. *TT 1: P 1: RC 1.* Jan. to May 1919 Asst. Engr., New York State Highway Dept., charge party on preliminary surveys, plans and estimates. *TT 0.4: P 0.4: RC 0.4: D 0.4.* May to Oct. 1919 Sales Engr., Buffalo (N. Y.) Slag Co. *TT 0.4: SP 0.4.* Oct. 1919 to Jan. 1922 sales work with Ludlum Steel Co., Watervliet, N. Y., electric furnace steels, etc. *TT 2.2: SP 2.2.* Jan. 1922 to Jan. 1924 Civ. Engr., Rochester Bureau of Municipal Research, Inc., investigation and reports on engineering problems. *TT 2: P 2: RC 2.* Jan. 1924 to date Commr. of Public Works, Rochester (departmental expenditure \$3 300 000 annually). *TT 3.4: P 3.4: RC 3.4: D 3.4.* *TT 17.7: SP 4.6: P 13.1: RC 12.3: D 9.1.* Refers to H. A. Abell, E. A. Fisher, O. H. Landreth, I. S. Osborn, F. J. Wagner, W. E. Weller, F. M. Williams.

1068

(3) **BELL, JAMES C.**, Assoc. M., 273 Rockingham St., Rochester, N. Y. (Elected April 7, 1915.) (Age 43. Born Albany, N. Y.) 1906 C. E., Rens. Pol. Inst. *TT 2: SP 2.* Summers 1902-1905 successively Axeman, Rodman, Chainman and Instrumentman, Dept. of State Engr. and Surveyor, New York. June 1906 to Jan. 1924 with same Department as follows: June-Dec. 1906 and March-June 1907 Engr. in charge of construction of about 36 miles of macadam highways (cost about \$350 000); Dec. 1906-March 1907 and June 1907-Jan. 1908 in charge of field party on surveys for highway construction; Jan. 1908-Feb. 1914 Engr. successively in charge of construction of Barge Canal Dams No. 2 at Crescent, N. Y. (\$500 000) No. 4, Lock No. 8, at Scotia, N. Y. and of No. 3, Lock No. 7 at Vischers Ferry, N. Y., including 45-ft. gravity dam, 1900-ft. spillway, headgates, junction lock, etc. (about \$1 250 000); Feb.-Aug. 1914 in charge of office force plotting and charting Mohawk River between Cohoes and Schenectady (16 miles); Aug.-Dec. 1914 Engr. in charge of construction of Crescent Highway Bridge over Mohawk River (five 227-ft. spans, cost about \$190 000), and Vischers Ferry Road Viaduct (about \$45 000); Dec. 1914-June 1916 Engr.-in-Chg. on contract to complete final closure of Crescent Dam, remove Lower Mohawk Aqueduct, and to direct ranging and buoying of canalized Mohawk River between Crescent and Schenectady; then Asst. Engr., June 1916 to Oct. 1917 Engr. in charge of construction of Freemons Bridge Mohawk River below Schenectady (two 212-ft. spans, \$175 000); Oct. 1917 to Sept. 1918 in charge of preliminary surveys, studies, acquisition of sites and tentative design and estimates for proposed Barge Canal terminals along lower Hudson River at Yonkers, Newburg, Poughkeepsie and Kingston; Sept. 1918 to Jan. 1924 Engr. in charge of construction of Western Gateway Bridge (reinforced concrete arch, 24 spans, about \$3 000 000) across Mohawk River at Schenectady. *TT 17.5: P 17.5: RC 17.5: D 5.5.* Jan. 1924-Jan. 1926 Commr. of Public Works, Schenectady. *TT 2: P 2: RC 2: D 2.* Jan.-Feb. 1926 Cons. Engr. on claim work with State Engr. and Surveyor. *TT 0.1: P 0.1: RC 0.1.* Feb. 1926 to date Constr. Engr., Board of Education, Rochester, N. Y. *TT 1.3: P 1.3: RC 1.3: D 0.8.* *TT 22.9: SP 2: P 20.9: RC 20.9: D 8.3.* Refers to R. G. Finch, F. E. Harrison, F. P. McKibben, J. A. O'Connor, A. R. Reilly, W. E. Weller, F. M. Williams.

1069

(9) **BENNETT, CHARLES STUART**, Assoc. M., Miami Conservancy Dist., Dayton, Ohio. (Elected March 12, 1923.) (Age 35 Born Cincinnati, Ohio.) 1914 B. S. in C. E., Purdue Univ. *TT 2: SP 2.* Summer 1911 Rodman and Draftsman, B. J. Arnold Co., Chicago, on surveys and plans for rapid transit loop at Cincinnati, Ohio. Summers 1912 and 1913 Inspector on pavement construction, Dept. of Eng., Cincinnati. Aug. 1914 to Jan. 1915 Asst. to City Engr., Elkhart, Ind., on construction of concrete and asphaltic concrete pavements, retaining walls and sewers, inspection, testing and laying out work. *TT 0.5: P 0.5.* March 1915 to Nov. 1917 Res. Engr. and Inspector, Dept. of Public Roads, State of Kentucky, in Greenup County, made surveys, plans and supervised construction of earth, gravel and macadam roads (65 miles), bridges and culverts; also in charge of force account work. *TT 2.7: P 2.7: RC 2: D 2.* Nov. 1917 to date with Miami Conservancy Dist., Dayton, Ohio, until Oct. 1919 as Draftsman and Computer, compiling data, preparing maps, etc., then

(4 years) Field Engr., in charge of survey parties, compiled data and estimates on flood protection project (\$30 000 000), supervised preparation of maps, etc., and since Oct. 1923 Engr., being Office Engr.-Mgr., in charge of headquarters office, and Asst. to Chf. Engr. on maintenance of flood protection works; also supervises field survey work and stream flow measurements, studies of rainfall, runoff, flow in channels, etc., for operation of flood control work; assisted in preparation of technical report on construction plant, methods and costs on the Miami Conservancy project. *TT 9.7: P 9.7: RC 7.7: D 1. TT 14.9: SP 2: P 12.9: RC 9.7: D 3.* Refers to C. A. Bock, F. J. Cellarius, C. H. Elffert, C. H. Paul, C. D. Putnam, S. K. Young.

1070

(12) **BURNETTE, CHAUNCEY ALLISON**, Assoc. M., 321 Hutton Bldg., Spokane, Wash. (Elected June 6, 1911.) (Age 44. Born Hartford, Ohio.) 1901 C. E., Ohio Northern Univ. *TT 2: SP 2.* Aug. 1901 to April 1904 Chairman, Transimian and Chf. of Party, and Sept. 1904 to Feb. 1905 Chf. of Party, Pittsburgh & Lake Erie Ry. Co. *TT 3.1: SP 2.7: P 0.4.* April to Sept. 1904 with American Steel & Wire Co., in charge of surveys, Pittsburgh Dist. *TT 0.4: P 0.4.* Feb. 1905 to Jan. 1908 Constr. Engr. on 68 miles, Winona Interurban Ry. Co., Indiana. *TT 2.7: P 2.7: RC 2.7.* Jan. to June 1908 on maintenance-of-way, Big Four R. R., Indianapolis, Ind. *TT 0.4: P 0.4: RC 0.4.* June 1908 to Feb. 1909 Asst. Chf. Draftsman, Monongahela Ry. Co., Brownsville, Pa., designed reinforced concrete arch (\$25 000). *TT 0.7: P 0.7: RC 0.3: D 0.4.* Feb. to Aug. 1909 Chf. Engr., Triad Eng. & Constr. Co., Goshen, Ind. *TT 0.5: P 0.5: RC 0.5.* Aug. 1909 to Nov. 1910 Asst. Engr., Missouri Pacific-Iron Mountain Ry. Co., St. Louis, Mo. *TT 1.3: P 1.3: RC 1.3.* Nov. 1910 to Feb. 1914 member of firm, Murray & Burnette, Cons. Engrs., Seattle. *TT 3.2: P 3.2: RC 3.2.* Feb. 1914 to date Branch Mgr. and Contr. Engr., Illinois Steel Bridge Co., Spokane, Wash., in charge of construction of buildings and bridges, including bridges over Spokane, Okanogan, Yakima, White Salmon and Molhem Rivers; designed Clarksfork River Bridge (\$106 000) and several others. *TT 13.2: P 13.2: RC 13.2: D 4. TT 27.5: SP 4.7: P 22.8: RC 21.6: D 4.4.* Refers to A. D. Butler, C. E. Davis, R. M. Murray, D. K. Orr, E. G. Taber.

1071

(10) **BURR, HENRY AMSDEN**, Assoc. M., 3515 Richland Ave., Nashville, Tenn. (Elected Jan. 15, 1923.) (Age 36. Born Granby, Canada.) 1913 B. S., Mass. Inst. Tech. *TT 2: SP 2.* June 1913 to July 1914 Draftsman, Pennsylvania Steel Co., Steelton, Pa., and (after April 1914) Stone & Webster Eng. Corporation, Cambridge, Mass., detailing structural steel and reinforced concrete. *TT 1.1: SP 1.1.* Aug. 1914 to Aug. 1915 traveling, etc. Aug. 1915 to May 1920 Draftsman, Checker and Designer, Nashville, Chattanooga & St. Louis Ry., Nashville, Tenn., on bridges, buildings, etc., supervised construction of 12-stall reinforced concrete roundhouse. *TT 4.7: SP 1: P 3.7: RC 0.7: D 3.* June 1920 to date Asst. Bridge Engr., Tennessee Dept. of Highways and Public Works, on design and details of reinforced concrete bridges, culverts, arches, and structural steel spans; also, in private practice made structural designs and had complete charge of engineering for various buildings, including garages, hospitals, a church, schools, factory, swimming pools, office buildings, a court building, etc. (steel and concrete and steel and reinforced concrete), (given in detail in application), Cons. Engr. checking designs and details of Nashville Trust Co. and Bennie Dillon Bldgs. (14 and 12 stories, steel frame), and Cons. Engr. for Davidson Co. on \$1 000 000 bridge over Cumberland River at Nashville. *TT 7.2: SP 1: P 6.2: RC 6.2: D 1. TT 15: SP 5.1: P 9.9: RC 6.9: D 4.* Refers to C. N. Bass, N. W. Dougherty, A. J. Dyer, F. E. Free-land, H. McDonald, C. B. Wilson.

1072

(13) **CALLAGHAN, MICHAEL JOSEPH**, Assoc. M., 368 City Hall, San Francisco, Cal. (Elected May 28, 1923.) (Age 45. Born San Francisco, Cal.) 1899 to 1906 Apprentice and Mechanic in shipbuilding, Union Iron Works Co. of San Francisco. *TT 7: SP 7.* 1906 to 1910 Mechanic and (2½ years) Foreman on reinforced concrete structural steel buildings for Ferrolite Co., Cotton Bros., Kittle Co., and other contractors. *TT 4: SP 4.* 1910 to 1918 with City Engr. of San Francisco as Surveyor's Field Asst., Surveyor and Draftsman. *TT 8: SP 6: P 2: RC 1.* April 1918 to Oct. 1919 Foreman and Slip Supt. in charge of construction of warships, Bethlehem Shipbuilding Corporation. *TT 1.5: P 1.5: RC 1.5.* Jan. to March 1920 Draftsman with Fred H. Tibbitts, Cons. Engr. *TT 0.2: SP 0.2.* March to Sept. 1920 with John Oglesby, Civ. Engr., as Engr. in charge of design of 22 miles of highways and six bridges. *TT 0.5: P 0.5: RC 0.5: D 0.5.* Sept. 1920 to Feb. 1921 Structural Draftsman on theatre design with G. Albert Landsburg, Archt. *TT 0.4: P 0.4: RC 0.4: D 0.4.* March 1921 to April 1922 Valuation Engr. with City Attorney of San Francisco. *TT 1: P 1: RC 1.* April 1922 to date with City Engr. of San Francisco as Project and Designing Engr. on Sunset Tunnel (\$1 650 000), on Bernal Cut (\$1 400 000).

TT 5.2: P 5.2: RC 5.2: D 5.2. TT 27.9: SP 17.3: P 10.6: RC 9.6: D 6.1. Refers to N. A. Eckart, N. R. Ellis, R. C. Hackley, G. C. Haun, M. M. O'Shaughnessy, E. J. Schneider, L. W. Stocker.

1073

(9) **CHAMBERLAIN, JOSEPH JENKS, Jr.**, Assoc. M., 2336 North Main St., Dayton, Ohio. (Elected Junior Oct. 3, 1911; Assoc. M. March 13, 1917.) (Age 40. Born Central Falls, R. I.) 1911 C. E., Cornell Univ. 1912 M. C. E., Harvard Univ. TT 2: SP 2. 1912 to 1914 Asst. Engr., Samuel Austen & Son Co., Cleveland, Ohio, 1 year acting as Transitman and Cost Clerk, and 1 year Asst. Designing Engr. TT 2: SP 2. Feb. 1914 to Nov. 1915 Asst. Engr. with E. F. Gibbons, Archt. and Engr., Cleveland, designing concrete buildings. TT 1.7: P 1.7: RC 1.7. Nov. 1915 to May 1917 Asst. Engr., Bridge Dept., Cuyahoga County, at Cleveland, designing bridges and approaches. TT 1.5: P 1.5: D 1.5. May 1917 to Jan. 1920 Asst. Engr., Watson Eng. Co., Cleveland, designing buildings and bridges. TT 2.7: P 2.7: RC 1: D 1.7. Jan. 1920 to Nov. 1923 Chf. Engr. and Vice-Pres., Davis-Hunt Constr. Co., Dayton, Ohio, construction estimating and supervision. TT 2.8: P 2.8: RC 2.8. Nov. 1923 to date member of firm, Smith-Chamberlain, Archts.-Engrs., Dayton, design and supervision of buildings and bridges. TT 3.7: P 3.7: RC 3.7. TT 16.4: SP 4: P 12.4: RC 9.2: D 3.2. Refers to N. J. Bell, J. W. Graham, C. H. Paul, C. D. Putnam, N. Q. Sloan, W. J. Watson, A. W. Zesiger.

1074

(14) **COCHRAN, ROBERT LEROY**, Assoc. M., State Engr.'s Office, Lincoln, Nebr. (Elected Sept. 9, 1919.) (Age 41. Born Avoca, Nebr.) 1910 B. Sc. C. E., State Univ. of Nebr. TT 2: SP 2. July to Dec. 1910 Asst. to County Surveyor, North Platte, Nebr. TT 0.5: SP 0.5. Feb. to July 1911 Chainman, Atchison, Topeka & Santa Fe R. R. Co. TT 0.5: SP 0.5. Jan. 1912 to Jan. 1917 County Surveyor, Lincoln County, Nebr.; after April 1915 also State Bridge Inspector. TT 5: P 5: RC 5. Jan. to Aug. 1917 and Feb. to July 1919 Asst. State Engr. of Nebraska. TT 1.1: P 1.1: RC 1.1. Aug. 1917 to Feb. 1919 Capt., U. S. Army, 1½ years overseas. TT 1.5: P 1.5: RC 0.7. July 1919 to July 1922 Dist. Engr., Nebraska State Highway Dept. TT 3: P 3: RC 3. July 1922 to March 1923 Cons. Engr., at North Platte, Nebr. TT 0.8: P 0.8. March 1923 to date State Engr. of Nebraska. TT 4.3: P 4.3: RC 4.3. TT 19: SP 3: P 16: RC 15.2. Refers to J. A. Bruce, G. L. Campen, F. T. Darrow, R. E. Edgecomb, W. Grant, C. E. Mickey.

1075

(6) **COOLIDGE, RICHARD NEWELL**, Assoc. M., 220 Osborne Lane, Sewickley, Pa. (Elected June 1, 1920.) (Age 35. Born Plattsmouth, Nebr.) 1916 B. S. C. E., Univ. of Ill. TT 2: SP 2. June 1910 to Sept. 1911 Chainman, Summer 1912 Head Chainman, and June 1913 to Feb. 1914 Head Chainman and Asst. Surveyor, Homestake Min. Co., Lead, S. Dak. TT 1.8: SP 1.8. Feb. to Sept. 1914 City Surveyor in charge of surveys for street, sidewalk and sewer improvement work, Lead. TT 0.6: SP 0.6. Summer 1915 Asst. City Engr. in direct charge of sewer and street work, Lead. Oct. 1916 to Feb. 1917 Draftsman, Illinois Central R. R., designing steel and concrete structures for track elevation and bridge work, Chicago, Ill. TT 0.4: P 0.4: RC 0.4: D 0.4. Feb. to Oct. 1917 designing and superintending construction of several structures for oil refinery of Standard Oil Co. at Whiting, Ind. TT 0.7: P 0.7: RC 0.7: D 0.7. Nov. 1917 to Feb. 1918 Surveyor on East River surveys for U. S. Engr. Dept., New York City. TT 0.3: P 0.3: RC 0.3. Feb. 1918 to Feb. 1919 Chf. of Party on East River surveys for improvement of New York Harbor Waterways. TT 1: P 1: RC 1: D 1. Feb. 1919 to March 1920 Designer in charge of plans for drill boats, dredges, and scows for East River Improvement work. TT 1: P 1: RC 1: D 1. March 1920 to Jan. 1922 machinery design, Ingersoll-Rand Co., Phillipsburg, N. J. TT 1.8: SP 0.6: P 1.2: D 1.2. Jan. 1922 to date with Dravo Contr. Co., Pittsburgh, Pa., until May 1922 designing and estimating steel construction and machinery; May 1922 to June 1923 Supt. in charge of construction of large drill boat, East River, New York (approx. \$500 000); June 1923 to March 1927 Asst. Chf. Engr., in direct charge of designers and draftsmen; since March 1927 Asst. Gen. Mgr., engineering work, steel fabrication, various construction and floating equipment. TT 5.5: P 5.5: RC 5.5: D 3.7. TT 15.1: SP 4.4: P 10.7: RC 9.2: D 7. Refers to J. H. Anderson, N. F. Brown, A. W. Dann, W. L. Kuehnle, J. H. Rostock, F. T. Sheets, A. N. Talbot.

1076

(6) **CORNELL, CHARLES BROWN**, Assoc. M., 901 City Bank Bldg., Youngstown, Ohio. (Elected Sept. 2, 1914.) (Age 46. Born Columbus, Ohio.) 2½ years student, Ohio State Univ. TT 0.7: SP 0.7. June 1903 to March 1910 Draftsman, Designer, Checker and Squad Boss on railroad motive power, conveyor and elevator, structural steel, cement mill design, etc. TT 6.7: SP 5.4: P 1.3: RC 1.3: D 3. March 1910 to June 1912 Asst. Engr. with E. G. Bradbury, Cons. Engr., Marble Cliff Heights, Ohio, on sewer system and sewage-treatment

plant, Grandview Heights, Ohio, surveys, design, plans and supervision of construction on sewer and water systems, etc. *TT 2.2: P 2.2: RC 1.3: D 0.9.* June 1912 to July 1915 Asst. Engr. and Div. Engr. on improvement of water-works, Akron, Ohio. (Barbour & Bradbury, Cons. Engrs.), distributing and storage reservoirs, dam, and distribution system, surveys, investigations, design, supervision of construction, part of time on surveys, investigations and report on industrial water supply. *TT 3.1: P 3.1: RC 2.6: D 0.5.* July 1915 to May 1917 Res. Engr., on improvement of sewage treatment, Columbus, Ohio (J. J. Morgan, Cons. Engr., C. B. Hoover, Chemist in Chg.), supervision of construction. *TT 1.8: P 1.8: RC 1.8.* May to Sept. 1917 Asst. Engr., Div. of Sewage Disposal, Cleveland, Ohio, on design of sewage-treatment works. *TT 0.3: P 0.3.* Nov. 1917 to March 1918 Asst. Engr., Inspection Bureau, Universal Portland Cement Co., Pittsburgh, Pa., investigating complaints. *TT 0.4: P 0.4.* March to May 1918 Engr. with R. Winthrop Pratt, Cons. Engr., Cleveland, on design of clear water basin for Alliance (Ohio) Water Works. *TT 0.2: P 0.2: D 0.2.* May to Oct. 1918 and June to Nov. 1919 with Hunkin-Conkey Co., as Chf. Engr. on construction and plans for U. S. Army Reserve Depot, Columbus, (1918), and Engr. construction of Kelly-Springfield Plant, Cumberland, Md. (1919). *TT 0.9: P 0.9: RC 0.9: D 0.2.* Oct. 1918 to June 1919 member of firm, Cornell & Cook, Contrs. for utilities, U. S. Housing Project 621, Alliance, Ohio, sewer and water works. *TT 0.7: P 0.7: RC 0.7.* Nov. 1919 to June 1920 Engr. with E. G. Bradbury, Cons. Engr., investigations and report on water supply for Goodyear Tire & Rubber Co., Akron, Ohio. *TT 0.5: P 0.5: RC 0.3: D 0.1.* June 1920 to May 1926 Field Engr. and Constr. Engr., Bureau of Water Works Extension, Columbus, on survey, design, plans and supervision of construction, O'Shaughnessy Dam and Reservoir and appurtenant work. *TT 5.9: P 5.9: RC 5.9: D 1.* May 1926 to date Field Engr., Mahoning Valley San. Dist., Youngstown, Ohio (W. H. Dittoe, Chf. Engr.), field operations for new source of development, treatment and delivery of new water supply for Niles and Youngstown, Ohio. *TT 1: P 1: RC 1. TT 2.4.4: SP 6.1: P 18.3: RC 15.8: D 5.9.* Refers to E. G. Bradbury, W. H. Dittoe, G. G. Dixon, V. A. Eberly, F. H. Eno, J. H. Gregory, C. T. Morris, C. E. Sherman.

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(1) **CRONYN, THEODORE**, Assoc. M., Plandome, N. Y. (Elected Oct. 10, 1921.) (Age 40. Born Greenfield, Mass.) Student in Civ. Eng., Stanford Univ. (Sept. 1909 to May 1911) and in Highway Eng., Univ. of Michigan (Dec. 1921 to June 1922). *TT 0.7: SP 0.7.* Jan. 1908 to Aug. 1909 Office Asst., Chainman, Rodman and Timekeeper with H. I. Reid, Colorado Springs, Colo., on irrigation survey and construction. *TT 1.7: P 1.7.* June 1910 Draftsman with Elliott & Scoggin, on land subdivision, Portland, Ore. July to Aug. 1910 Chf. of Party, Twin Falls Logging Co., on logging railroad location, Yacolt, Wash. Oct. to Dec. 1912 Chf. of Party, Gen. Eng. Co., on topographic survey, Athol, Mass. *TT 0.2: P 0.2: RC 0.2.* April 1913 to Sept. 1914 Transitman, Compassman, Draftsman and Fire Guard, U. S. Forest Service, Portland, on timber cruising, topographic surveys and soil reports. *TT 1.5: SP 1: P 0.5.* Feb. 1915 to April 1916 Draftsman, Transitman and Solar Compassman, and May 1916 to Sept. 1917 Chf. of Party on surveys, U. S. Gen. Land Office, Idaho. *TT 2.6: SP 0.3: P 2.3: RC 1.3: D 0.3.* Oct. 1917 to July 1919 on road repair and construction, building layout, 23d Engrs., U. S. Army, 1½ years with A. E. F. *TT 1.8: P 1.8: RC 0.7: D 0.7.* Sept. 1919 to June 1921 Asst. Engr., Res. Engr. and Dist. Engr., Public Works Dept., Santo Domingo, on highway location and construction. *TT 1.8: P 1.8: RC 1.8: D 1.2.* July to Aug. 1922 Res. Engr. with Thos. F. Bowe, New York City, on sewers, sidewalks, street paving. *TT 0.2: P 0.2: RC 0.2.* Sept. 1922 to March 1927 with Standard Oil Co. of Venezuela, S. A., as Chf. of Party on surveys, railroad reconnaissance, preliminary and final location and levels (1½ years), Constr. Supt., narrow-gauge railroad, in complete charge (11 months) triangulation, field work and computations (5 months), road maintenance and construction (4 months) and scouting and statistics of oil field operations (11 months). *TT 4.6: P 4.6: RC 4.6: D 3.1. TT 15.1: SP 3.6: P 11.5: RC 8.8: D 5.3.* Refers to A. H. Blanchard, W. E. Brown, J. H. Caton, 3d, W. E. Givens, R. M. McCrone, H. H. Pitcairn, L. H. Walker.

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(15) **DRAGER, WALTER LOUIS**, Assoc. M., San Francisco de los Romas, Aguascalientes, Mexico. (Elected Junior May 3, 1910; Assoc. M. May 7, 1913.) (Age 41. Born Hamilton, Ill.) Licensed Civ. Engr., State of Colorado. Aug. 1905 to May 1908 student, Coll. of C. E., Univ. of California (1 year) and Cornell Univ. (2 years). *TT 1: SP 1.* Summers Chainman and Rodman. May 1908 to April 1910 Asst. City Engr., Auburn, N. Y., in charge of construction of sewers and sewage-purification plant; designed and layed out two sewer systems, prepared contractors' estimates, and assisted in design of details for septic tanks. *TT 2: SP 0.5: P 1.5: RC 1.3: D 0.2.* May 1910 to Jan. 1912 Asst. Engr. and Draftsman with O. P. Thomas, Cons. Engr., Johnstown, Pa., acting as Res. Engr. on construction of sewers and pavements; in charge of surveys and designs for sewage-purification plant for Borough of

South Fork, and reservoirs and water-supply system for Borough of Hooversville, Pa. *TT 1.7: P 1.7: RC 1: D 0.7.* Jan. 1912 to Jan. 1914 Asst. City Engr., Schenectady, N. Y., in charge of design and construction of sewer systems, including \$300 000 outfall sewer, and assisted in design of details for sewage-purification plant (Imhoff tanks and sprinkling filters). *TT 2: P 2: RC 1.5: D 0.5.* March 1914 to June 1915 Asst. to Constr. Engr., U. S. Reclamation Service, detailing and laying out structures and estimating quantities on construction of Grand Valley Dam, Colo., revising German designs. *TT 1.2: P 1.2: D 1.2.* July 1915 to Feb. 1917 Asst. Engr., Public Utilities Comm., on water supply investigation for Denver, surveys and designs for reservoir and distribution system, design of gravity and arch type dams and canal structures, estimating quantities and making water-supply studies. *TT 1.6: P 1.6: RC 1: D 0.6.* Feb. 1917 to Feb. 1919 Asst. Engr., U. S. Reclamation Service, Denver, in charge of tests and inspection of materials, preliminary investigation of new projects, with designs and estimates for dams and canal systems, water supply studies and special investigations of irrigation structures. *TT 2: P 2: RC 1.5: D 0.5.* Feb. 1919 to Aug. 1926 Office Engr. and Constr. Engr., U. S. Bureau of Reclamation, examining contracts, supervising inspection, investigating new projects, preliminary designs and estimates of dams and canal systems and examination of reports: Res. Engr., on construction of St. Mary's siphon, Milk River Project, Mont. *TT 7.5: P 7.5: RC 5.5: D 2.* Aug. 1926 to date Office Engr. and Asst. Res. Engr., J. G. White Corporation, Mexico, assisting with design of high arch dams and canal structures; supervising draftsman and field parties on construction; surveys and water-supply investigations. *TT 0.7: P 0.7: RC 0.5: D 0.2.* *TT 19.7: SP 1.5: P 18.2: RC 12.3: D 5.9.* Refers to E. B. Debler, S. O. Harper, M. C. Hinderlider, J. Hinds, I. E. Houk, R. I. Meeker, O. T. Reedy, J. L. Savage, R. F. Walter, F. E. Weymouth.

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(8) **DRYFOOSE, EARL DANIEL**, Assoc. M., 721½ East Lawrence St., Springfield, Ill. (Elected May 19, 1924.) (Age 30. Born Toledo, Ohio.) 1919 B. S. C. E., and 1924 C. E., Purdue Univ. *TT 2: SP 2.* May to Sept. 1917 Rodman, Walbridge Aldinger Co. of Detroit, Mich., on construction of Selfridge Aviation Field. Oct.-Dec. 1918 Instrumentman, Toledo (Ohio) Ry. & Light Co., on location of towers for high-tension system, also some drafting work in Production Dept. *TT 0.3: SP 0.3: D 0.3.* June 1919 to date with Illinois Highway Div., Springfield, Ill., until Sept. 1920 as Jun. Highway Engr. on design of steel and concrete bridges, under supervision, then Asst. Highway Engr. on design, estimates and specifications for bridge work, and after June 1923 Asst. Bridge Engr., being Aid in supervision of state bridge work and county work. *TT 8: P 8: RC 6.8: D 4.* *TT 10.3: SP 2.3: P 8: RC 6.8: D 4.3.* Refers to R. R. Benedict, G. F. Burch, C. M. Hathaway, C. Older, F. T. Sheets, F. Tarrant.

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(12) **ELLIOTT, JOHN ARTHUR**, Assoc. M., 340 East Twenty-Eighth St. N., Portland, Ore. (Elected Jan. 6, 1915.) (Age 40. Born Cleveland, Ohio.) 1909 B. S. in C. E., Univ. of Wash. *TT 2: SP 2.* Summers 1904 to 1908 Chainman, Compassman, Scout, Levelman and Transitman on township subdivision, Northern Pacific, State of Washington and Seattle Park Board. May 1909 to March 1910 Locating Engr. and April 1910 to May 1911 Div. Engr., State of Washington. *TT 2: P 2: RC 2.* June 1911 to Sept. 1913 Engr. and Contr. *TT 2.5: P 2.5: RC 2.5.* Oct. 1913 to March 1914 Locating Engr., Columbia River Highway, Oregon. *TT 0.5: P 0.5: RC 0.4: D 0.1.* April to June 1914 Designing Engr., U. S. Reclamation Service. *TT 0.3: P 0.3: D 0.3.* July 1914 to Nov. 1916 Constr. Engr. and Locating Engr., State of Oregon. *TT 2.5: P 2.5: RC 2: D 0.5.* Dec. 1916 to April 1918 Highway Engr., Wasco County. *TT 1.3: P 1.3: RC 0.7: D 0.6.* May 1918 to date Highway Engr., U. S. Bureau of Public Roads. *TT 9: P 9: RC 8: D 1.* *TT 20.1: SP 2: P 18.1: RC 15.6: D 2.5.* Refers to H. L. Bowlby, J. S. Bright, L. I. Hewes, H. W. Holmes, R. B. Wright.

1081

(1) **FONT, MANUEL**, Assoc. M., Box 266, Guayama, Porto Rico. (Elected Aug. 4, 1924) (Age 38. Born Humacao, Porto Rico.) 1913 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Sept. 1913 to Nov. 1915 Asst. San. Engr. with F. W. Dalrymple, Ch. Engr., San Juan, Porto Rico, design, superintendence, inspection of water-works, sewerage systems, buildings, chemical and bacteriological analysis of water and sewage. *TT 2.1: P 2.1: RC 0.1: D 2.* Nov 1915 to May 1923 U. S. Army Officer, highest rank attained Major; Asst. Prof. of Civ. Eng., Coll. of Agriculture and Engineering, Mayaguez, Porto Rico; taught structures, bridge design, sanitary engineering and geology. *TT 7.5: SP 6.2: P 1.3: RC 1.3.* May 1923 to July 1924 Chf. Engr. in charge of public improvements, City of San Juan, design, construction, superintendence of water-works (\$1 800 000), filtration plant (\$500 000), sewer system (\$300 000), five school buildings (\$350 000) and a hospital (\$150 000). *TT 1.2: P 1.2: RC 1.2: D 1.*

July 1924 to Jan. 1925 Asst. Archt. and Supt. of Public Bldgs., Dept. of the Interior, Govt. of Porto Rico, in general charge of maintenance of all government buildings and Gen. Inspector of new building construction. *TT 0.5: P 0.5: RC 0.5.* Jan. 1925 to date Asst. Chf. Engr., Porto Rico Irrigation Service, under supervision of Chf. Engr., has general charge of all technical work, designs, estimates and reports and assists Chf. Engr. with management, operation, maintenance, improvements and extensions (\$8 000 000), new construction (\$5 000 000) of irrigation (35 000 acres) and hydro-electric systems (14 000 000 kw. annually). *TT 2.5: P 2.5: RC 2.5: D 1.5.* *TT 15.8: SP 8.2: P 7.6: RC 5.6: D 4.5.* Refers to M. V. Domenech, A. S. Lucchetti Otero, W. W. Schlecht, E. Totti y Torres, C. del Valle Zeno.

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(8) GORMAN, ARTHUR ELLSWORTH, Assoc. M., 6743 Olympia Ave., Chicago, Ill. (Elected March 16, 1925.) (Age 34. Born Haverhill, Mass.) 1917 B. S. in C. E., Worcester Pol. Inst. *TT 2: SP 2.* June 1916 to Aug. 1917 Asst. Chemist, Worcester (Mass.) Sewer Dept.; Asst. in operation of activated sludge experimental plant; also slow sand filters and chemical precipitation process. *TT 1.2: P 1.2.* Nov. 1917 to May 1919 Asst. San. Engr., U. S. Public Health Service, until Dec. 1918 on rural sanitation, in charge of malaria control work in Ft. Ogelthorpe Extra Cantonment Zone, then directed installation of can-type sewerage system at Ft. Benning, Columbus, Ga. *TT 1.5: P 1.5: RC 1.2: D 0.1.* May to July 1919 directed malaria control work around Raleigh, N. C., and (3 weeks) in Texas. Aug. to Dec. 1919 San. Engr., International Health Board, New York City, on special mosquito surveys in tide-water in Virginia and Bamberg, S. C. *TT 0.4: SP 0.4.* Jan. 1920 to Jan. 1924 Asst. San. Engr. U. S. Public Health Service, until Sept. 1920 as Acting State San. Engr., Kentucky, then on sanitary survey of water supplies in New England States, and after Jan. 1921 Dist. Engr. in charge Interstate San. Dist. No. 3, Chicago, Ill., supervising water supplies on interstate trains in five states and on interstate vessels on Great Lakes, St. Lawrence River and parts of Ohio and Mississippi River. *TT 4: P 4: RC 3.5: D 0.4.* Jan. 1924 to Jan. 1926 Chf. San. Engr., Chicago Dept. of Health, in charge of water chlorination, etc. *TT 2: P 2: RC 2: D 0.6.* Jan. 1926 to date Chf. San. Engr. in charge of Div. of Water Safety Control, Bureau of Eng., Dept. of Public Works, Chicago, on chlorination, and investigation of sources of pollution, of water supply and in charge of research for water filtration. *TT 1.3: P 1.3: RC 1.3: D 0.4.* *TT 12.4: SP 2: P 10.4: RC 8: D 1.5.* Refers to C. B. Ball, W. W. DeBerard, A. W. French, L. Pearse, H. W. Streeter, A. Wolman.

1083

(1) GRUNAUER, MORTIMER, Assoc. M., 49 St. Nicholas Terrace, New York City. (Elected Junior Feb. 6, 1912; Assoc. M. March 13, 1917.) (Age 38. Born New York City.) 1910 B. S. in C. E., N. Y. Univ. *TT 2: SP 2.* Aug. 1910 to Jan. 1912 with New York State Dept. of Highways on construction, until April 1911 as Inspector, then Engr. in responsible charge of 28-ft. brick and bituminous macadam pavement, Dolgeville, N. Y., including stormwater sewer system, catch basins, culverts, pipe-lines, etc. (cost \$50,000). *TT 1.4: SP 0.7: P 0.7: RC 0.7.* Jan. to May 1912 with Public Service Comm., 1st Dist., on line and grade party, subway construction, New York City. *TT 0.4: SP 0.4.* May 1912 to date with Bing & Bing Constr. Co., Inc., New York City, as follows: May 1912-March 1913 Asst. Supt.; April-Oct. 1913 Supt. of Constr. 17-story building (\$800 000) and 13-story building (\$350 000); Nov. 1913-Sept. 1914 designing and writing specifications for steam-heating, electric-lighting and plumbing systems, estimating; Oct. 1914-March 1915 Asst. Supt. on construction, 5-story reinforced concrete building (cost \$75 000); April-Dec. 1915 Chf. Estimator, in charge of estimating office, loft and public buildings, factories, apartments, etc. (reinforced concrete, brick and steel, etc.); Jan.-June 1916 Office Supt. in charge of office and field work, 9-story building (\$350 000), plans, specifications, estimates and contracts, and had direct supervision of outside construction; July-Dec. 1916 Field Supt. in responsible charge of construction of 9-story reinforced concrete abattoir (\$200 000); Jan. to Nov. 1917 Office Supt. in charge of construction of 14-story hotel (\$700 000); Nov. 1917 to April 1918 investigating oil properties in Oklahoma; April 1918 to Aug. 1919 with U. S. Army in France; Sept. 1919-April 1922 Asst. to Chf. Engr., and since April 1922 Chf. Engr. in charge of plans, specifications, contracts and field work, apartment buildings and hotels (\$21 300 000). *TT 15: P 15: RC 13: D 9.2.* *TT 18.8: SP 3.1: P 15.7: RC 13.7: D 9.2.* Refers to K. Berle, A. Brociner, I. Harby, S. F. Holtzman, J. Loewenstein, L. D. Rights.

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(13) GRUNDEL, IRVING GEORGE, Assoc. M., San Juan Bautista, Cal. (Elected Jan. 19, 1920.) (Age 41. Born Alma, Cal.) Took course at International Correspondence Schools. Jan. 1901 to Jan. 1905 Apprentice Machinist, and Jan. 1905 to March 1906 Draftsman, Vulcan Iron Works. *TT 1.2: SP 1.2: D 1.* March 1906 to May 1907 Draftsman, Syndicate Water Co., Berkeley, Cal., being Constr. Supt. on San Pablo Pumping Station pipe line and wells. *TT 1.2: SP 1.2: D 0.9.* May 1907 to July 1909 Engr. and Draftsman with Couchot &

Thurston, San Francisco, on design of concrete and steel structures, being Supt. in charge of sinking concrete caisson for Santa Clara Coll. Water System (\$5 000). *TT 2.2: SP 0.1: P 2.1: RC 0.3: D 1.9.* July 1909 to Sept. 1920 with Union-Oil Co. of California, as Draftsman and Designer, being Engr. of Construction of acid recovery plant (\$65 000); Designer and Constr. Supt., Santa Paula Refinery (\$30 000), Refinery Engr., Oleum Refinery; Operating Supt., Santa Paula and Arila Refineries. *TT 11.2: P 11.2: RC 8.7: D 2.5.* Oct. to Dec. 1920 Designing Engr., Edwards Wire Works, San Francisco, designing special wire mill machinery. *TT 0.2: P 0.2: RC 0.2: D 0.2.* Dec. 1920 to March 1921 Designing Engr. with Wing & Beebe, Palo Alto, Cal., on design of 600-ft. concrete and steel bridge (ten 60-ft. spans) for City of Santa Cruz, 650-ft. and 1 000-ft. steel guyed-masts for Federal Telegraph Co. *TT 0.2: P 0.2: RC 0.2: D 0.2.* March to May 1921 Asst. Supt., Humble Oil & Refining Co., Ranger, Tex., in charge of construction of Colony Creek Refinery (\$500 000). *TT 0.2: P 0.2: RC 0.2: D 0.2.* Oct. 1921 to Feb 1922 Shop Supt., L. J. Boric Co., San Francisco, Templar Motor Car Agency. *TT 0.3: P 0.3: RC 0.3.* Feb. 1922 to date Chf. Engr. and Asst. Supt. of Operation, Old Mission Portland Co., and California Central R. R. (subsidiary); built Marble Falls R. R., on survey for 7-mile aerial wire rope tramway and prospecting rock deposits (\$25 000); designed and had charge of construction of eight 20 ft. by 70 ft. reinforced concrete cement silos with steel pack house, elevating and conveying machinery, etc. (\$130 000), also two concrete storage tanks (20 ft. deep), etc. *TT 5.3: P 5.3: RC 5.3: D 2.* *TT 22: SP 2.5: P 19.5: RC 15.2: D 8.9.* Refers to M. C. Couchot, R. W. Fenn, G. W. Howson, R. J. Reed, J. Rosenwald, A. A. M. Russell, P. A. Swafford, E. T. Thurston.

1085

(7) **HARTGERING, JOHN McRAE**, Assoc. M., 2640 Buhl Bldg., Detroit, Mich. (Elected Jan. 14, 1918.) (Age 37. Born Hermosa, S. Dak.) Registered Mining & Mech. Engr., State of Michigan. 1909 B. S. E. M., S. Dak. School of Mines. *TT 2: SP 2.* 1910 completed Mech. Eng. course, Iowa State Coll. Summers 1904-1907 Rodman and Chairman for various mining companies. Summer 1908 Chf. Draftsman, small foundry and machine shop, Rapid City, S. Dak. Summer 1909 in charge of field party on survey in Wyoming and South Dakota, irrigation and mining work. *TT 0.2: SP 0.2.* June 1910 to June 1911 Engr., Hudson Motor Car Co., Detroit, Mich. *TT 1: SP 1.* June to Oct. 1911 Chf. Chemist, Canadian Cement Co. *TT 0.4: P 0.4: RC 0.4.* Oct. 1911 to July 1914 in private practice at Rapid City, S. Dak., designed and erected work (about \$1 000 000), consisting of reservoir and water supply, gold mills, cement and hydro-electric plants, made surveys, irrigation, mining claims, log railroads, and city work. *TT 0.7: P 0.7: RC 0.7: D 0.5.* July 1914 to Feb. 1915 with Detroit St. Ry. Comm., on valuation of Detroit United Ry. Lines, being Asst. Div. Engr. and later Div. Engr. on equipment, also on valuation of power houses, pavements, special tangent track and franchise. *TT 0.7: P 0.7: RC 0.7.* Feb. 1915 to Feb. 1918 City of Detroit Sewage Investigation (C. W. Hubbell, Cons. Engr.), had charge of all field work and mechanical design. *TT 1: P 1: RC 1: D 0.5.* Feb. 1916 to date member of firm, Hubbell, Hartgering & Roth, Cons. Engrs., on water supply, sewerage, sewage disposal and municipal engineering. *TT 11: P 11: RC 11: D 6.* *TT 17: SP 3.3: P 13.7: RC 13.7: D 7.* Refers to I. C. Brewer, H. P. Eddy, G. H. Fenkell, S. A. Greeley, J. H. Gregory, J. R. Hendry, C. W. Hubbell, T. A. Leisen, L. G. Lenhardt, E. D. Rich, H. E. Riggs, A. Roth, F. L. Weaver.

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(7) **HIRN, WILLIAM CULLEN**, Assoc. M., 516 North Sycamore St., Lansing, Mich. (Elected Nov. 26, 1918.) (Age 44. Born Spencerville, Ohio.) 1907 C. E., Tri-State Coll., Angola, Ind. Sept. 1915 to June 1917 at Univ. of Michigan, part of time one of three graduate students in charge of Sanitary Experiment Station. *TT 0.7: SP 0.7.* Sept. 1908 to Nov. 1910 with T. Chalkley Hatton, until April 1909 as Transitman, then Res. Engr. on construction of clear-water reservoir and water-works improvement, Owego, N. Y., and after Sept. 1909 Asst. Engr. on construction of sewers and paving, Pensacola, Fla. *TT 2.2: P 2.2.* March 1911 to July 1912 First Asst. Engr. to Superv. Engr. on construction and design of sewers and paving, Rome, Ga. *TT 1.3: P 1.3.* July 1912 to Aug. 1913 with H. S. Jaudon Eng. Co., until Dec. 1912 as Designing Engr. on sewer system for Savannah, Ga., then Res. Engr. and Supt. of Constr. on sanitary sewer system for Adel, Ga. *TT 1.1: P 1.1: RC 0.6: D 0.5.* Aug. 1913 to Sept. 1915 City Engr. of St. Marys, Pa., in charge of design and construction of paving, sanitary and storm-water sewers and street improvement and street cleaning. *TT 2.1: P 2.1: RC 2.1.* June 1917 to March 1918 Supt. of Highways, Elk and Cameron Counties, Pennsylvania Highway Dept., St. Marys, Pa. *TT 0.6: P 0.6.* March 1918 to Aug. 1919 Asst. State San. Engr., Lansing, Mich. *TT 1.4: P 1.4.* Aug. 1919 to date First Asst. Engr., Eng. Bureau, Michigan Dept. of Health, in charge of supervision of public water supplies. *TT 7.8: P 7.8: RC 7.8.* *TT 17.2: SP 0.7: P 16.5: RC 10.5: D 0.5.* Refers to O. E. Eckert, W. C. Hoad, C. W. Hubbell, E. H. Pate, E. D. Rich, A. Roth.

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(9) **HOGUE, EDWARD AUGUSTUS CLYDE**, Assoc. M., 801 Neave Bldg., Cincinnati, Ohio. (Elected Nov. 3, 1915.) (Age 41. Born Locust Lane, Va.) 1907 B. S. in Civ. Eng., 1908 B. S. in Min. Eng., and 1910 C. E., Washington and Lee Univ. *TT 2: SP 2.* July 1908 to Jan. 1913 with Dist. of Columbia, until Sept. 1909 as Instrumentman, Water Dept., then Inspector of elevators, responsible for one-half of city's elevators (under Inspector of Bldgs.). *TT 4.5: P 4.5: RC 3.3.* Jan. to Sept. 1913 Engr. and Computer, Bldg. Dept. of Washington, examining and approving plans of building. *TT 0.7: P 0.7: D 0.7.* Sept. 1913 to Jan. 1915 Engr., and Jan. 1915 to March 1917 Chf. Engr., Keystone Fireproofing Co., New York City; had full charge of design and redesign of structural framework of buildings, design of details of floor systems, and supervision and inspection of their installation (several million sq. ft. annually); also charge of matters in connection with approval of building codes, insurance exchanges, and underwriters' laboratories, with fire, load and water tests, and of sales work requiring engineering. *TT 3.5: P 3.5: RC 3.5: D 3.5.* March 1917 to Dec. 1919 Sales and Constr. Engr., H. H. Robertson Co., Pittsburgh, Pa., in charge of sales development, design and construction of gypsum fireproofing. *TT 2.7: P 2.7: RC 2.7: D 2.7.* Dec. 1919 to date Gen. Mgr., Lathrop-Hoge Gypsum Const. Co., Cincinnati, Ohio, in full charge of design and construction; 1922 patented gypsum roof design with gypsumboard undersurface on rail sub purlins. *TT 7.4: P 7.4: RC 7.4: D 7.4.* *TT 20.8: SP 2: P 18.8: RC 17: D 14.3.* Refers to R. W. Bame, E. D. Gilman, E. S. Humphreys, J. C. Lathrop, H. D. Loring, E. K. Ruth, C. M. Stegner.

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(7) **HUSTAD, ANDREW P.**, Assoc. M., 4132 Aldrich Ave. South, Minneapolis, Minn. (Elected Aug. 31, 1915.) (Age 46. Born Aalesund, Norway.) 1908 C. E., Univ. of Minn. *TT 2: SP 2.* June to Nov. 1904 Recorder, U. S. Coast and Geodetic Survey. *TT 0.5: SP 0.5.* Nov. 1904 to Jan. 1906 mining, Pittsburg & Montana Mining & Smelting Co. *TT 1.2: SP 1.2.* Jan. to Sept. 1906 Rodman, Chairman and Draftsman with Barker & Wilson, Min. Engrs., Butte, Mont. *TT 0.7: SP 0.7.* May to Oct. 1907 Draftsman, May 1908 to Jan. 1910 Draftsman and Asst. Engr., and Jan. 1910 to July 1919 Prin. Asst. Engr. and Mgr., C. A. P. Turner Co., Minneapolis, Minn. *TT 11.1: SP 0.6: P 10.5: RC 10.5: D 9.5.* July 1919 to date member of firm, The Hustad Co., Cons. Engrs., Minneapolis, on plans, design and supervision of reinforced concrete and structural steel bridges, buildings and manufacturing plants. *TT 7.9: P 7.9: RC 7.9: D 7.9.* *TT 23.4: SP 5: P 18.4: RC 18.4: D 17.4.* Refers to H. H. Burgess, J. Cowin, V. L. Fixen, W. E. King, C. R. Shepley, R. D. Thomas, W. H. Wheeler.

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(9) **JONES, HARVEY P.**, Assoc. M., 1601 Second National Bank Bldg., Toledo, Ohio. (Elected June 6, 1921.) (Age 36. Born Sandwich, Ill.) 1916 B. C. E., Univ. of Mich. *TT 2: SP 2.* 1913 to 1915 Res. Superv. Engr., W. S. Shields Co., Chicago, Ill. on construction of brick, concrete and macadam pavements, sanitary and storm sewers, land-drainage and sewage-treatment works at Sandwich, Princeton and Naperville, Ill. (cost approx. \$500 000). *TT 2: P 2: RC 2.* 1916 to 1918 San. Engr. for City of Toledo, in charge of investigations, reports and plans for intercepting sewer system, pumping stations, storm and relief sewers; work included sewage analysis, sewer gaugings and industrial investigations. *TT 2: P 2: RC 2: D 2.* 1918 to 1926 with Fuller & McClintock engaged as follows: 1918 to 1920 Res. Engr. at Toledo, on design and construction of intercepting sewer system, comprising interceptors, pumping station, outfall, siphons and regulators (total approx. \$5 000 000); 1920 to 1922 Designing Engr. on interceptors, pumping stations and relief sewers at Lima, Ohio, and New Castle, Pa., also preliminary investigations and water supply reports at Kansas City, Mo., and Buffalo, N. Y.; 1922 to 1925 Office Mgr. at Toledo, in charge of supervision of construction of intercepting sewers, reports and designs for sewerage and water-supply projects; 1925 to 1926 Office Mgr. at West Palm Beach, Fla., on design of sanitary and storm sewers, pumping stations, intercepting sewers and sewage-treatment works. *TT 8: P 8: RC 8: D 8.* 1926 to date member of firm, H. P. Jones & Co., in charge of supervision of construction of sanitary and storm sewers at West Palm Beach, design and supervision of additional interceptors, pumping station and treatment works for Toledo (approx. cost \$4 000 000). *TT 1: P 1: RC 1: D 1.* *TT 15: SP 2: P 13: RC 13: D 11.* Refers to G. W. Fuller, W. D. Gerber, E. D. Keil, J. R. McClintock, S. C. McKee, L. T. Owen, G. N. Schoonmaker, G. W. Simons, Jr.

1090

(10) **KAYS, MARION REED**, Assoc. M., 316 Guaranty Bldg., West Palm Beach, Fla. (Elected Dec. 6, 1910.) (Age 46. Born Tonica, Ill.) 1906 B. S. in C. E., Univ. of Ill. *TT 2: SP 2.* June 1903 to Aug. 1904, summer 1905 and June 1906 to Sept. 1909 with U. S. Geological Survey as Draftsman, Planetable Recorder, Instrumentman, Chf. of Party,

Computer, Cost Keeper and Asst. Engr., in Arizona, Wyoming and Nebraska, on surveys, and construction, canal location, etc. *TT 4.4: SP 2.9: P 1.5: D 0.5.* Sept. 1909 to Jan. 1910 and July to Aug. 1920 on non-professional work. Feb. 1910 to Nov. 1911 Asst. to Constr. Supt., J. G. White & Co., Inc., on Idaho Irrigation Co.'s project, Richfield, Idaho, and Asst. Chf. Engr., Idaho Irrigation Co., being Office Executive and Chf. Asst. on surveys, field organization, construction, maintenance, operation and costs, 100 000-acre project. *TT 1.8: P 1.8: D 0.5.* Dec. 1911 to June 1920 with Idaho Irrigation Co., Richfield, Idaho, as Chf. Engr., and after Feb. 1912 also Vice-Pres. and Gen. Mgr., business management, construction, maintenance, operation and management of allied utilities. *TT 8.6: P 8.6: RC 8.6: D 0.5.* Sept. 1920 to April 1921 Res. Cons. Engr. (representing A. L. Harris), Paradise-Verde Irrigation Dist., Phoenix, on proposed 100 000-acre irrigation and power project, general supervision of design of storage and diversion dams, miscellaneous structures and concrete lined canals. *TT 0.7: P 0.7: D 0.2.* May 1921 to Nov. 1922 with Beckman & Linden Eng. Corporation, San Francisco, in charge of branch office at Phoenix; directed surveys, plans and estimates and made reports on several proposed reclamation projects (total 50 000 acres). *TT 1.6: P 1.6: RC 1.6: D 0.5.* Dec. 1922 to Aug. 1923 in private practice of engineering at Phoenix, irrigation and underground water studies, etc. *TT 0.5: P 0.5: RC 0.5: D 0.2.* Sept. to Dec. 1923 measurements and studies of canal seepage losses and Res. Engr. on enlargement of hydro-electric power plant at Roosevelt Dam for Salt River Valley Water Users Association at Phoenix. *TT 0.3: P 0.3: RC 0.3.* Jan. 1924 to date Supt. and Chf. Engr., Lake Worth Drainage Dist (125 000 acres), West Palm Beach, Fla., business management, construction, maintenance and operation, studies of surface runoff, seepage and sub-irrigation. *TT 3.5: P 3.5: RC 3.5: D 0.5.* *TT 23.4: SP 4.9: P 18.5: RC 14.5: D 2.9.* Refers to G. C. Baldwin, C. C. Cragin, A. S. Crane, E. B. Darlington, J. A. Harman, I. W. McConnell, C. H. Ruggles, F. E. Weymouth.

1091

(5) **KELLEY, EARL FOSTER**, Assoc. M., Bureau of Public Roads, Washington, D. C. (Elected Sept. 12, 1916.) (Age 41. Born Latimer, Iowa.) 1909 B. C. E., and 1919 C. E. Iowa State Coll. *TT 2: SP 2.* June 1909 to May 1913 Structural Detailer and Checker, Ambridge Plant, American Bridge Co., detailing and checking shop drawings for bridges and buildings. *TT 3.9: SP 3.9.* May 1913 to April 1915 Asst. Designing Engr. in charge of steel bridge design, and April 1915 to Sept. 1919 Asst. Bridge Engr. in charge of all bridge design, Iowa Highway Comm. *TT 6.3: P 6.3: RC 6.3: D 6.3.* Sept. 1919 to Aug. 1920 Chf. Draftsman, Red Oak (Iowa) Bridge & Iron Works, in charge of shop drawings for steel highway bridges. *TT 0.9: P 0.9: RC 0.9.* Oct. 1920 to date with U. S. Bureau of Public Roads, until Nov. 1925 as Highway Bridge Engr. on standardization of highway bridge specifications, etc., being Chairman of Comm. on Bridges and Structures, American Assoc. of State Highway Officials; Nov. 1925 to Dec. 1926 Acting Chf., and since Dec. 1926 Chf., Div. of Tests, in charge of testing of materials and research work. *TT 6.7: P 6.7: RC 6.7: D 5.1.* *TT 19.8: SP 5.9: P 13.9: RC 13.9: D 11.4.* Refers to C. D. Curtiss, L. N. Edwards, W. R. Glidden, O. L. Grover, A. Marston, S. B. Slack, F. R. White.

1092

(14) **KESNER, HENRY JAMES**, Assoc. M., Univ. of Nebraska, Lincoln, Nebr. (Elected Junior Dec. 6, 1910; Assoc. M. March 4, 1913.) (Age 43. Born Ontario, Canada.) Registered Structural Engr., State of Illinois. 1905 B. A., 1907 B. S., and 1911 C. E., Univ. of Colo. *TT 2: SP 2.* May to Aug. 1907 Jun. Engr., U. S. Reclamation Service, acting as Hydrographer on Uncompahgre Project. *TT 0.2: SP 0.2.* Sept. 1907 to June 1908 Instructor in Structural Eng., Univ. of Minnesota. *TT 0.8: P 0.8.* Nov. 1908 to March 1909 Jun. Engr., U. S. Geological Survey, Technologic Branch, Pittsburgh, Pa. *TT 0.4: SP 0.4.* March to June 1909 Draftsman, Minneapolis Steel & Machinery Co. *TT 0.2: SP 0.2.* Aug. 1909 to May 1913 Instructor (2 years) and Asst. Prof. of Civ. Eng. (2 years), Univ. of California, including Summer School of Surveying; 1912 being Director of the Summer School; also June 1910 to Jan. 1913 (at various times) with Chas. Derleth, Jr., Cons. Engr., designing and checking on Oakland Auditorium, Native Sons' Hall, Sather Campanile, etc. *TT 3.5: SP 1.7: P 1.8: RC 1.8: D 0.3.* Sept. 1915 to June 1921 Instructor (2 years), Asst. Prof. (1 year) and Associate Prof. (3 years) of Structural Eng., Purdue Univ.; also made reports on bridge projects to Northern Indiana Traction Co., Ft. Wayne, Ind., and Towns of Attica and Plymouth, Ind. Summer 1916 Valuation Asst., Chicago, Burlington & Quincy R. R., and Summer 1917 Instrumentman, Valuation, Interstate Commerce Comm., Chicago. Summer 1918 Designer, Foundation Co. of New York, Chicago Office. Summers 1919 and 1921 Designer, Bridge Dept., Indiana Highway Comm. Summer 1920 Inspector of concrete bridges, Wyoming State Highway Comm. *TT 6: SP 1: P 5: RC 3.4: D 0.6.* Sept. 1921 to June 1923 Associate Prof. of Civ. Eng., Armour Inst. of Technology, Chicago. Summer 1922 Designer for H. S. Crocker, Cons. Engr., Denver, Colo., on reconstruction of 16th St. Via-

duct. *TT 1.7: P 1.7: RC 1.7: D 0.2.* Summer 1923 Structural Engr. for South Park Comms., Chicago. *TT 0.2: P 0.2: RC 0.2: D 0.2.* Sept. 1923 to date Asst. Prof. and (since Sept. 1925) Associate Prof. of Civ. Eng., Univ. of Nebraska, in charge of courses in structural engineering. Summer 1924 Checker, Chicago Bridge & Iron Works. Summer 1926 Designer for W. H. Adams, Cons. Engr., Detroit, Mich. *TT 3.1: P 3.1: RC 3.1: D 0.4. TT 17.8: SP 5.1: P 12.7: RC 10.2: D 1.7.* Refers to W. H. Adams, A. W. Andrews, M. I. Evinger, C. E. Mickey, A. Smith, R. B. Wiley.

1093

(11) LANE, WILLIAM WALTER, Assoc. M., 1416 North First St., Phoenix, Ariz. (Elected June 1, 1920.) (Age 38. Born in Mathews County, Va.) Dec. 1909 to Sept. 1910 Rodman and Chainman, Arizona Eastern R. R. Co. *TT 0.8: SP 0.8.* Sept. 1910 to Aug. 1911 Levelman and Rodman and Feb. 1912 to Feb. 1913 Asst. Engr. in charge of construction, and on location, Pacific Elec. R. R. Co., Los Angeles, Cal. *TT 1.9: SP 0.9: P 1.* Aug. 1911 to Feb. 1912 Transitman, Arizona Territorial Highway Dept. *TT 0.5: P 0.5.* Feb. to Oct. 1913 Chf. of Party, Richardson Constr. Co., Esperanza, Sonora, Mexico, in charge of survey camp (3 parties), topographical survey. *TT 0.7: P 0.7: RC 0.7.* Jan. 1914 to Jan. 1916 Instrumentman in charge of party, U. S. Indian Irrigation Service, in Arizona, on topographical surveys, irrigation investigation and canal location. *TT 2: P 2: RC 1.* Jan. 1916 to Jan. 1917 Asst. Supt. of Constr., Arizona Highway Dept., 6 months in charge of grading camp and 6 months on instrument work. *TT 1: P 1: RC 0.5.* Jan. 1917 to May 1919 County Engr., and May 1919 to Jan. 1923 Highway and County Engr., Pinal County, Ariz., in full charge of highway location, design, construction and maintenance. *TT 6: P 6: RC 6: D 6.* Jan. 1923 to June 1924 Asst. State Engr., and June 1924 to date Chf. Engr., Arizona Highway Dept., in charge of design, construction and maintenance. *TT 4.4: P 4.4: RC 4.4: D 4.4. TT 17.4: SP 1.7: P 15.7: RC 12.7: D 10.2.* Refers to R. V. Leeson, W. C. Lefebvre, G. L. McLane, C. G. Morrison, C. R. Olberg, C. C. Small, G. E. P. Smith.

1094

(10) LAWRENCE, FRANK ELMAKER, Assoc. M., Okeechobee, Fla. (Elected Nov. 27, 1917.) (Age 42. Born Callicoon Depot, N. Y.) 1906 C. E., Cornell Univ. *TT 2: SP 2.* July 1906 to Feb. 1907 Transitman and Asst. Engr. on surveys, Central of Georgia Ry. *TT 0.6: SP 0.6.* Feb. to Dec. 1907 Asst. Engr., New York, New Haven & Hartford R. R., in charge of party on valuation. *TT 0.8: SP 0.8.* Dec. 1907 to Jan. 1910 with Cuban Govt. at Cienfuegos, as Engr. in Chg. of harbor improvements, comprising design of docks and superintendence of harbor dredging, and (after Jan. 1909) of water-works installation. *TT 2.2: P 2.2: RC 2.2: D 2.2.* Jan. to Aug. 1910 Contr. Engr., until April 1910 on location and construction of wagon road to Carlota Mine, Cuba, heavy construction through mountains, then on location and estimates for an electric line out of Cienfuegos and surveys for a water development, including design of storage basin, dam, etc. *TT 0.5: P 0.5: RC 0.5: D 0.3.* Feb. 1911 to July 1912 Track Supervisor, Central of Georgia Ry. *TT 1.3: P 1.3.* July 1912 to Aug. 1914 Div. Engr., Brazil Ry., in charge of design and execution of reconstruction work on Parana and Sao Paulo-Rio Grande Rys., involving several million dollars. *TT 2.1: P 2.1: RC 2.1: D 2.1.* Feb. 1915 to May 1917 Appraiser of Lands, C. of Ga. Ry., 1 year in charge of department. *TT 2.1: P 2.1: RC 1.* May 1917 to June 1919 with U. S. Army engaged as follows: May to June 1917 at Engr. Officers' Training Camp; June 1917 to March 1918 1st Lieut., March 1918 to Feb. 1919 Capt., and after Feb. 1919 Major, 17th Ry. Engrs., in France (Aug. 1917 to July 1919), from March to Aug. 1918 in charge of building and camp construction at St. Nazaire, also Camp Adj., Camp No. 3, and Commanding Officer, Headquarters Co., 17th Engrs.; then Regimental Supply Officer and Engr. Supply and Purchasing Officer, Base Sec. No. 1; had charge of organization and operation of shops, lumber yards, mills, motor transport, distribution of materials, etc.; Dec. 1918 to June 1919 with American Relief Administration, until April 1919, in charge of food distribution in Dalmatia, Montenegro, Bosnia and Hercegovina, then Director for Jugo-Slavia, and American Representative, Allied Ry. Mission, same territory. *TT 2.4: P 2.4: RC 2.2.* July 1919 to May 1922 Contr. Engr. on concrete roads and streets in Augusta and Atlanta, Ga., and Chatham County. *TT 2.8: P 2.8: RC 2.8.* May 1922 to Aug. 1923 Representative in Cuba for Wills & Sons & McCarthy, made studies and estimates for Cuban paving program. *TT 1.2: P 1.2: RC 1.2: D 1.2.* Oct. 1923 to Sept. 1924 Chf. Engr., Connors Highway Constr., hard surface highway through Florida Everglades. *TT 0.9: P 0.9: RC 0.9: D 0.9.* Sept. 1924 to date in private practice as Cons. and Constr. Engr., City Engr. of Okeechobee, designed and constructed water filtration plant, drainage districts, paving and sewers, road paving. *TT 2.8: P 2.8: RC 2.8: D 2.8. TT 21.7: SP 3.4: P 18.3: RC 15.7: D 9.5.* Refers to W. G. Atwood, C. S. Coe, W. E. Darrow, H. W. Edwards, R. Y. Patterson, J. S. Sewell, G. W. Simons, Jr

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(6) **LEVERING, HOWARD ALLEN**, Assoc. M., Ceredo, W. Va. (Elected June 1, 1920.) (Age 40. Born Levering, Ohio.) Registered Prof. Engr., State of West Virginia. 1910 E. M., Ohio State Univ. *TT 2: SP 2.* July 1910 to Nov. 1911 with Eng. Corps and Min. Engr., Island Creek Coal Co., Holden, W. Va. *TT 1.3: SP 1: P 0.3: RC 0.3.* Nov. 1911 to Jan. 1914 Min. Engr., in complete charge of mining engineering, New River & Pocahontas Consolidated Coal Co., Berwind, W. Va. *TT 2.2: P 2.2: RC 1.9: D 0.3.* Jan. to March 1914 associated with his father at Mt. Vernon, Ohio. March 1914 to Aug. 1918 Asst. Testing Engr., State Highway Dept. of Ohio, in charge of Physical Testing Dept. for road materials. *TT 4.4: SP 1: P 3.4: RC 3.4.* Aug. 1918 to Jan. 1922 County Road Engr., Wayne County, W. Va., in charge of highway program (\$1 300 000). *TT 3.4: P 3.4: RC 1.7: P 1.7.* Jan. 1922 to date Senior Asst. Engr., State Road Comm., at Huntington, W. Va. *TT 5.3: P 5.3: RC 2.7: D 2.6.* *TT 18.6: SP 4: P 14.6: RC 10: D 4.6.* Refers to W. Brewster, C. P. Fortney, G. H. Hill, C. E. McCoy, H. J. Spelman.

1096

(1) **MASURY, ALFRED FELLOWS**, Assoc. M., Anable Ave. and 34th St., Long Island City, N. Y. (Elected Jan. 6, 1915.) (Age 44. Born Danvers, Mass.) 1904 M. E., Brown Univ. *TT 2: SP 2.* June 1904 to June 1906 Draftsman, Gen. Elec. Co., East Lynn, Mass., on steam-turbine work. *TT 2: SP 1: P 1.* June 1906 to Nov. 1907 Chf. Draftsman, Vaughn Machine Co., Peabody, Mass., on design and construction of additions to plant, including brass foundry and cast-iron furnace, and redesign and construction of leather machinery, etc. *TT 1.6: P 1.6: D 1.6.* Nov. 1907-July 1913 with Hewitt Motor Co., until Jan. 1912 as Engr., assisted in developing Hewitt trucks, supervised design of 10-ton Hewitt truck and superintended construction of various trucks, ordered material, etc.; after Jan. 1912 as Factory Mgr., superintended redesign and application to road oiling of 3½- and 4-ton trucks for Standard Oil Co. *TT 5.6: P 5.6: RC 2.1: D 1.5.* 1912 to 1913 (evenings) took courses in highway engineering at Columbia Univ. July 1913 to June 1914 Mgr. of service station, and June 1914 to date Chf. Engr., International Motor Co.; since 1914 also Vice-Pres. and Director in charge of operation of Mack truck engineering service and experimental shops, now at Long Island City, developing trucks, buses and railcars; since 1915 work included supervising design, building, testing and putting into operation road oiling equipment on 48 trucks for Standard Oil Co. (N. J.); design of highway-sprinkling devices, supervision and design of automatic tailgate mechanism for spreading stone on highways, of special bodies and trucks for mixed asphalt delivery and spreading, and of special equipment for distributing wet mixed concrete from end of truck, on advisory Comm., U. S. Ordnance Dept., etc. *TT 13.8: P 13.8: RC 13.8.* *TT 25: SP 3: P 22: RC 15.9: D 3.1.* Refers to C. S. Allen, A. H. Blanchard, W. H. Connell, J. R. Freeman, A. T. Goldbeck, J. E. Hill.

1097

(15) **PAGE, JOHN MARSHALL**, Assoc. M., 3406 Classen Boulevard, Oklahoma City, Okla. (Elected Jan. 13, 1919.) (Age 36. Born Baltimore, Md.) 3½ years student, Baltimore Polytechnic Inst. *TT 1: SP 1.* May 1910 to March 1911 Rodman, Levelman and Instrumentman with Morse & Cockey, Engrs., Baltimore, Md., from Sept. to Dec. 1910 in charge of construction of small sewerage system at Centerville, Md. *TT 0.8: SP 0.8.* April 1911 to Jan. 1917 with Maryland State Roads Comm., until May 1912 as Inspector on macadam state highways, then Supt. of Constr. in charge of construction, labor and materials, and after Jan. 1913 as Asst. to Res. Engr. designed state roads, established grades and drainage systems and had supervisory charge of construction; built modern highways under various topographical conditions. *TT 5.7: SP 1.7: P 4: RC 4.2: D 4.* Feb. to Sept. 1917 Res. Engr., Virginia State Highway Comm., Lynchburg, Va., in charge of construction and maintenance of highways in Campbell County. *TT 0.6: P 0.6: RC 0.6: D 0.6.* Sept. 1917 to March 1919 with U. S. Army, until Nov. 1917 at Second Officers' Training Camp, Ft. Myer, Va., then with Ordnance Dept., at Aberdeen Proving Ground, Md., supervising construction of concrete highway system on the reservation, etc., as 2d Lieut., and after Sept. 1918 1st Lieut. *TT 1.2: P 1.2: RC 1.2: D 0.5.* March 1919 to Jan. 1920 Res. Engr., Delaware State Highway Dept., Harrington, Del., in charge of concrete highway construction (25 miles) in Kent and Sussex Counties. *TT 0.7: P 0.7: RC 0.7.* Feb. 1920 to March 1924 Highway Engr., U. S. Bureau of Public Roads, during 1920 at Oklahoma City, Okla., then at Ft. Worth, Tex. *TT 4.1: P 4.1: RC 4.1: D 4.1.* March 1924 to date State Highway Engr., at Oklahoma City, in charge of State Highway Dept. *TT 3.3: P 3.3: RC 3.3: D 3.3.* *TT 17.6: SP 3.6: P 14: RC 13.2: D 12.5.* Refers to H. K. Bishop, J. D. Fauntleroy, J. B. Hawley, V. V. Long, W. H. Rhodes, H. G. Shirley, C. M. Upham.

1098

(8) **PAQUETTE, CHARLES ALFRED**, Assoc. M., 1735 Fullerton Ave., Chicago, Ill. (Elected April 6, 1898.) (Age 55. Born Detroit, Mich.) 1890 B. S., 1891 C. E. and Litt. B., and 1896 M. S., Univ. of Notre Dame. *TT 2: SP 2.* July 1891 to May 1892 Draftsman, Lake Shore & Michigan Southern Ry. *TT 0.8: SP 0.8.* May 1892 to Aug. 1902 with Peoria & Eastern Ry. (Cleveland, Cincinnati, Chicago & St. Louis Ry., Lessor) as follows: May 1892–March 1893 Transitman; April 1893–June 1894 Asst. Engr. in charge of construction; also designed and superintended masonry; July 1894–Sept. 1899 Engr., M. of W., on maintenance and construction; designed and directed building of Peoria and Eastern shop buildings at Urbana, Ill.; Oct. 1899–Aug. 1902 Supt. *TT 10.2: SP 0.8: P 9.4.* Oct. 1902–May 1905 Supt., Chicago Div., June 1905–Nov. 1912 Asst. Chf. Engr., Dec. 1912–Feb. 1915 Chf. Engr., M. of W., and March 1915–March 1924 Chf. Engr., all for C., C., C. & St. L. Ry. *TT 21.3: P 21.3: RC 21.3.* April 1924 to date Pres., White Constr. Co., and M. E. White Co., Gen. Contrs., and Chairman of Board, White Paving Co.; since March 1927 also Cons. Engr., City of Dayton, Ohio. *TT 3.3: P 3.3: RC 3.3.* *TT 37.7: SP 3.7: P 34: RC 24.6.* Refers to W. G. Atwood, W. B. Causey, G. W. Kittredge, H. F. Passel, C. H. Paul, A. R. Raymer, A. M. Turner, C. A. Wilson.

1099

(10) **PHILBRICK, BENJAMIN SIMPSON**, Assoc. M., Calderwood, Tenn. (Elected March 2, 1915.) (Age 43. Born Boston, Mass.) 1909 B. S., Univ. of Mich. *TT 2: SP 2.* Sept. 1909 to July 1910 Rodman, Chainman and (1910) Concrete Inspector, J. G. White & Co., irrigation work. *TT 0.9: SP 0.9.* July to Aug. 1910 Transitman, U. S. Reclamation Service. *TT 0.1: SP 0.1.* Aug. 1910 to Sept. 1911 Tracer, Chainman, Field Draftsman and Transitman, Mexico Northwestern Ry. *TT 1.1: SP 1.1.* Sept. to Dec. 1911 Transitman, Pearson & Pacheca Ry., Mexico. *TT 0.3: SP 0.3.* Dec. 1911 to Dec. 1915 with Mexico Northern Power Co., until Feb. 1912 as Transitman, in charge of field party on location, then Asst. Reconnaissance Engr. in charge of field parties determining drainage area and locating land properties to be flooded by lake formed by Company's dam; then in charge of laying out all engineering work, lines, grades, etc., at main and diversion dams, LaBoquilla; Sept. 1912 to Sept. 1913 at Boquilla (main) Dam; after May 1913 as Res. Engr.; Sept. 1913 to Jan. 1914 (work closed) in complete charge of engineering; after Jan. 1914 Res. Engr. of whole project; also had charge of Meteorological Dept. and of Testing Laboratory. *TT 4: P 4: RC 3: D 0.5.* Jan. 1916 to Nov. 1920 with Aluminum Co. of America until April 1917 as Asst. Res. Engr. on hydro-electric developments (100 000 h. p.) on Yadkin River at Badin, then Res. Engr. on development (96 000 h. p.) on Little Tennessee River at Tapoco, N. C. *TT 4.8: P 4.8: RC 4.8.* Nov. 1920 to May 1922 with Fraser-Brace & Co., Montreal, Canada, as Engr. in charge of building match factory at Pembroke, Ont., Officeman on inventory and cost data work in Montreal, Quebec, Engr. in charge of railroad location near Great Falls, Manitoba, and Designing Engr. on mixer and crusher plant installation for hydro-electric development on Winnipeg River and Great Falls, Manitoba. *TT 1.5: P 1.5: RC 1.5: D 0.3.* May 1922 to Jan. 1926 with C. B. Hawley Eng. Corporation, Washington, D. C., until Dec. 1924 as Res. Engr. and Constr. Supt. on 40 000-h. p. hydro-electric development on Clarion River near Clarion, Pa., then Constr. Supt. on railroad location, water-power investigations, design and field work. *TT 3.7: P 3.7: RC 3.7: D 0.5.* Jan. 1926 to date with Aluminum Co. of America as Asst. Gen. Supt. and Engr. in charge of hydro-electric development (66 000 h. p.) on Cheoah River in Western North Carolina. *TT 1.5: P 1.5: RC 1.5.* *TT 19.9: SP 4.4: P 15.5: RC 14.5: D 1.3.* Refers to J. H. Brace, A. P. Davis, C. B. Hawley, J. W. Rickey, D. C. Walser.

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(11) **PIERCE, CHARLES WILLIAM**, Assoc. M., 1427 West Fifty-First St., Los Angeles, Cal. (Elected Junior April 17, 1917; Assoc. M. Oct. 11, 1920.) (Age 36. Born Denver, Colo.) Studied civil, electrical and mechanical engineering at International Correspondence Schools and reinforced concrete construction, bridge design, hydraulics, etc., at Univ. of Wisconsin. June 1908 to June 1910 Rodman and Transitman, Geo. P. Moore Co., Denver, Colo. *TT 2: SP 2.* June 1910 to Sept. 1911 Rodman, Levelman and Transitman, Denver Reservoir & Irrigation Co. *TT 1.2: SP 1.2.* Sept. 1911 to Aug. 1912 Levelman and Transitman, Pueblo Rocky-Ford Irrigation Co. *TT 0.9: SP 0.9.* Aug. to Nov. 1912 Asst. to Div. Engr., M. of W., Chicago, Burlington & Quincy R. R. *TT 0.2: SP 0.2.* Nov. 1912 to July 1913 traveling and studying large engineering projects in Pacific Northwest. *TT 0.7: SP 0.7.* July 1913 to Aug. 1914 Transitman for Chas. Fisk, Jr., subdivision work around Los Angeles, Cal. *TT 1.1: SP 1.1.* Aug. 1914 to April 1917 and April to Nov. 1919 with Los Angeles County Road Dept., as Transitman, C. E. Draftsman, Party Chf. and (after April 1919) Civ. Engr. in charge on design, location and construction of roads in mountains and desert. *TT 3.2: SP 0.4: P 2.8: RC 2.8: D 1.* April 1917 to April 1919

Ensign, Lieut. (j.g.) and Lieut., U. S. Navy engineering work (steam, electric and civil); Math. Instructor and in charge of fire-rooms, engine-rooms and auxiliary stations on ships. *TT 2: SP 2: RC 2.* Nov. 1919 to Dec. 1922 Asst. Bridge Engr., Dist. No. 12, U. S. Bureau of Public Roads, Ogden, Utah, bridge design, estimating and construction. *TT 3.1: P 3.1: RC 3.1: D 3.* Jan. 1923 to May 1924 Superv. Field Engr., Portland Cement Association, Los Angeles, in charge of promotion of concrete construction in Los Angeles, Kern, Ventura, Santa Barbara and San Luis Obispo Counties, California. *TT 1.4: P 1.4: RC 1.4.* May 1924 to date City Engr., Ventura, Cal., in charge of engineering and construction of sewer, paving, lights, water, ocean outfall, sewer screening plant, etc. (approx. \$3 500 000). *TT 3: P 3: RC 3: D 3.* *TT 18.9: SP 8.6: P 10.3: RC 12.3: D 7.* Refers to R. L. Anderson, H. R. Angwin, O. F. Cooley, W. N. Frickstad, A. Jones, G. W. Jones, F. H. Joyner, R. W. Lawton, B. W. Matteson, C. A. Smith.

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(6) PRICE, PHILIP WALLIS, Assoc. M., 7 Hollenden Pl., Squirrel Hill Station, Pittsburgh, Pa. (Elected Junior April 2, 1901; Assoc. M. Feb. 5, 1908.) (Age 47. Born Pittsburgh, Pa.) 1899 C. E., Western Univ. of Pa. *TT 2: SP 2.* Summers 1896 and 1898 and July 1899 to July 1901 Rodman, successively with Allegheny Valley Ry., Allegheny & Western Ry., and Pennsylvania R. R. *TT 2: SP 2.* July 1901 to April 1902 Topographer, Eastern Oklahoma Ry. *TT 0.8: SP 0.8.* April to Dec. 1902 Asst. Engr., Great Northern Ry., in charge of 12-mile revision on Great Falls & Canada Ry. *TT 0.8: P 0.8: RC 0.8.* Jan. to July 1903 Draftsman, American Bridge Co., Keystone Plant, Pittsburgh, and (after May 1903) Northern Pacific Ry. *TT 0.5: SP 0.5.* July to Oct. 1903 Transitman in charge of party, Puget Sound Power Co. *TT 0.3: SP 0.3.* Oct. 1903 to May 1904 Engr., in charge of surveys for Yakima Development Co., North American Dredging Co., Tacoma & Eastern Coal Co., and Oregon Land & Water Co. *TT 0.6: P 0.6: RC 0.6.* May to Dec. 1904 Field Asst., U. S. Reclamation Service, on topographic surveys in State of Washington. *TT 0.8: P 0.8: RC 0.8.* March to June 1905 Asst. Engr., Bureau of Filtration, Pittsburgh, on location and construction of filtration plant. *TT 0.2: P 0.2: RC 0.2.* June 1905 to Jan. 1907 Asst. Engr., U. S. Reclamation Service, design and construction on projects in Idaho, Washington and Oregon. *TT 1.6: P 1.6: RC 0.8: D 0.8.* Feb. 1907 to Jan. 1908 Asst. Engr., Gulf Pipe Line Co. and Gulf Refining Co., on construction of main pumping stations and distribution stations in Oklahoma, Texas and Louisiana. *TT 0.9: P 0.9: RC 0.9.* Jan. 1908 to Jan. 1909 Asst. Engr., Ohio Oil Co., in charge of party on location of pipe line and construction of main pumping stations in Pennsylvania. *TT 1: P 1: RC 1.* Jan. 1909 to 1924 Asst. Engr., County Engr.'s office, and 1924 to date Prin. Asst. Engr., Bureau of Bridges, Allegheny County Dept. of Public Works, on design, construction and maintenance of all county bridges; at present on construction of 48 bridges, including eleven river bridges. *TT 18.5: P 18.5: RC 12: D 6.5.* *TT 30: SP 5.6: P 24.4: RC 17.1: D 7.3.* Refers to N. F. Brown, V. R. Covell, G. S. Davison, A. A. Henderson, D. C. Henny, E. G. Hopson, M. Knowles, C. M. Reppert.

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(1) RANDOLPH, EDWARD SYDNEY, Assoc. M., Box 72, Balboa Heights, Canal Zone. (Elected Nov. 9, 1920.) (Age 37. Born Bayou Goula, La.) About 3½ years student mechanical engineering, Louisiana State Univ. *TT 1: SP 1.* Dec. 1910 to Aug. 1913 Draftsman, Panama R. R. Co., at Colon, Panama, on alignment, etc., drafting on concrete and steel structures. *TT 2.7: SP 2.7.* Aug. 1913 to Nov. 1921 with Panama Canal, until June 1919 as Draftsman on design of mill buildings, reinforced concrete piers, dry docks, coaling plants, towers, concrete docks, etc., then Jun. Engr., Estimator and Designer for Bldg. Div., in charge of designs, specifications, estimates and reports for various structures, and after July 1920 Asst. Engr. for Bldg. Div., on designs, inspections, estimates and specifications, being Asst. to Engr. in charge of construction and design (about \$2 000 000 annually). *TT 8.2: SP 3.8: P 4.4: RC 2: D 2.6.* Nov. 1921 to May 1922 Office Engr., Panama Constr. Co., on designs, estimates, field engineering for highway (50 km.). *TT 0.5: P 0.5: RC 0.5.* May 1922 to May 1927 with Panama Canal, until Aug. 1923 as Asst. Engr., Sec. of Office Engr., on designs, estimates, inspections, specifications and reports, acting as Office Engr. (4 months) and as Res. Engr. (1½ months), Bldg. Div.; after Aug. 1923 Office Engr. responsible for technical work on maintenance of locks and designs for new construction, including a retail store (\$250 000), four automatic telephone central offices, Diesel electric plant (12 000 h. p.), and a warehouse and bakery (to cost \$1 000 000); also in consulting practice; recently reported on wharf and port of Corinto, Nicaragua. *TT 5: P 5: RC 4.5: D 2.5.* *TT 16.4: SP 6.5: P 9.9: RC 7: D 5.1.* Refers to G. C. Bunker, H. Burgess, J. S. Butler, F. H. Cooke, T. C. Morris, J. J. Morrow, M. L. Walker.

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(4) **RISLEY, WARNER IRELAN**, Assoc. M., Guarantee Trust Bldg., Atlantic City, N. J. (Elected June 4, 1913.) (Age 44. Born Pleasantville, N. J.) 1904 B. S. in C. E., Rutgers Coll. TT 2: SP 2. June to Dec. 1904 Asst. Engr. in charge of party on surveys and municipal work for H. C. Von Emburg, Plainfield, N. J. TT 0.6: SP 0.6. Jan. 1905 to June 1906 Computer, Title Guarantee & Trust Co., New York City. TT 1.4: SP 1.4. June to Oct. 1906 Asst. Engr., Board of Water Supply, New York City, in charge of party on surveys, triangulation on Catskill Aqueduct and Kensico Dam, Valhalla, N. Y. TT 0.4: P 0.4: RC 0.4. Oct. 1906 to March 1907 Asst. Engr., New York Central & Hudson River R. R. Co., in charge of party on resurveys. TT 0.5: P 0.5: RC 0.5. March 1907 to Sept. 1909 Topographical Draftsman and Asst. Engr., Board of Water Supply, in charge of drafting and of party on primary traverses, location of dam, dykes, aqueduct and roads. TT 2.4: P 2.4: RC 2.4. May 1917 to July 1919 Capt., Engrs., U. S. Army, in command of Co. A. later of 504th Engr. Battalion on construction of warehouses, barracks, railroads, roads and mechanical bakery (800 000 lbs. of bread daily) at Is-sur-tille, France. TT 2.2: P 2.2: RC 2.2. Sept. to Dec. 1919 Supt. of Constr. for W. B. Porch, Atlantic City, N. J., on building construction, including concrete warehouse. TT 0.3: P 0.3: RC 0.3. Nov. 1920 to May 1922 Designing Engr., with Nicholas S. Hill, Jr., New York City, on design of sewage disposal, water supplies and on valuation and rates. TT 1.5: P 1.5: RC 1.5: D 1.5. May 1922 to Nov. 1923 Engr., Town of Nutley, N. J., on sewerage, water mains, pavements, etc. TT 1.6: P 1.6: RC 1.6: D 1.6. Sept. 1909 to May 1917, Jan. to Nov. 1920 and Nov. 1923 to date in private practice as Civ. Engr. at Atlantic City, N. J., on design and construction, water supply, sewerage, sewage disposal, storm water drains and conduits, pavements, piers, jetties, beach-protection works, etc., including (in 1920) design of water-pumping station, reservoir and pipe lines for Ventnor City, N. J.; also City Engr., Ventnor City, Longport, Somers Point (Sept. 1909 to May 1917) and Absecon City and Northfield, N. J. (since Nov. 1923). TT 12.1: P 12.1: RC 12.1: D 12.1. TT 25: SP 4: P 21: RC 21: D 15.2. Refers to V. Gelineau, J. W. Hackney, N. S. Hill, Jr., M. R. Pugh, A. L. Sherman, G. L. Watson, C. G. Wigley.

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(7) **ROLLMAN, OTTO CHARLES**, Assoc. M., 1138 South Jackson St., Green Bay, Wis. (Elected Nov. 21, 1921.) (Age 38. Born Shawano, Wis.) Jan. 1911 to June 1912. C. E. Student, Highland Park Coll., Ames, Iowa. TT 0.3: SP 0.3. June 1905 to May 1906. Chainman, Nov. 1906 to July 1907 Draftsman, July 1907 to Jan. 1911 Chainman, Compassman, Rodman and Instrumentman, and June 1912 to March 1913 Inspector and Instrumentman, all for Chicago & North Western Ry. TT 5.7: SP 5.7. May to July 1906 Inspector, Wisconsin & Northern Ry. TT 0.2: P 0.2. March 1913 to April 1918 County Highway Engr., Shawano County, Wis. TT 5: P 5: RC 5: D 5. April 1918 to March 1920 Div. Maintenance Engr. and March 1920 to date Div. Eng., Wisconsin Highway Comm. TT 9: P 9: RC 9: RC 9: D 7.1. TT 20.2: SP 5.3: P 14.9: RC 14.7: D 12.1. Refers to G. F. Daggett, A. L. Hambrecht, A. R. Hirst, F. F. Mengel, F. E. Turneure.

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(5) **SCHUYLER, PHILIP KINGSLAND**, Assoc. M., U. S. Bureau of Public Roads, Washington, D. C. (Elected May 28, 1923.) (Age 31. Born Orange, N. J.) 1921 B. S. in Civ. Eng., Univ. of Wis. TT 2: SP 2. June 1915 to Sept. 1916 Rodman, Transitman and Chf. of Party, New York, Ontario & Western R. R., on maintenance and valuation. TT 1.3: SP 1: P 0.3. Sept. 1916 to Feb. 1917 Draftsman, Bridge Dept., Wisconsin Highway Comm. TT 0.6: P 0.6. Aug. 1917 to April 1919 First Lieut., Coast Artillery Corps, U. S. Army, in command of Company in Panama, laid out base lines and made maps for artillery fire control. TT 1.9: P 1.9: RC 1.9. April to June 1919 Transitman, U. S. Aluminum Co., being Res. Engr. on foundation work. TT 0.3: P 0.3: RC 0.3. June to Sept. 1919 Transitman, U. S. Corps of Engrs., on canals surveys. TT 0.3: P 0.3. May to Sept. 1920 Designer, Bridge Dept., Louisiana State Highway Comm., in charge of bridge design. Sept. 1921 to Sept. 1924 Asst. Engr., North Carolina State Highways Comm., in charge of surveys on bridge and culvert work. TT 3: P 3: RC 3. Sept. 1924 to Sept. 1925 Associate Prof. of Highway Eng. Univ. of North Carolina, in charge of courses in highways, surveying and materials. TT 1: P 1: RC 1. Sept. 1925 to Sept. 1926 First Bridge Engr., Comision Nacional de Caminos (Mexican Federal Highway Comm.) in charge of design and construction of bridges on 1 500 miles of highway. TT 1: P 1: RC 1: D 1. Sept. 1926 to date Associate Highway Bridge Engr., U. S. Bureau of Public Roads, Washington, D. C., on investigations of design, at present on field survey of toll bridges. Since Sept. 1926 also Associate Prof. of Civ. Eng., George Washington Univ., Washington, D. C., in charge of course in highway engineering. TT 0.8: P 0.8: RC 0.8: D 0.5. TT 12.2: SP 3: P 9.2: RC 8: D 1.5. Refers to G. M. Braune, O. B. Bestor, W. Cain, C. N. Conner, J. R. Lapham, R. E. Snowden, C. M. Upham.

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(14) SPANN, WILLIAM MIMS, Assoc. M., City Engr., St. Joseph, Mo. (Elected June 19, 1922.) (Age 38. Born Memphis, Ala.) 1908 B. Sc. in Civ. and Min. Eng., Miss. Agri. and Mech. Coll. TT 2: SP 2. 1905 to 1909 (vacations) Rodman and Chairman on surveys. May to Sept. 1909 Rodman and Draftsman, Tallahatchie Drainage Comm., Clarksdale, Miss. TT 0.4: SP 0.4. Sept. 1909 to July 1912 Asst. Engr., Mississippi Geological Survey, Jackson, Miss., on planetable maps, soil investigations, reports, etc. TT 2.8: P 2.8. July 1912 to Jan. 1913 Cons. Engr., Jackson, on municipal improvements, sub-divisions and reports as Soil Expert. Jan. to May 1913 Chf. Engr., Mississippi Geological Survey, Jackson, investigating feasibility of diverting Tennessee River into Tombigbee River as aid in flood control on Mississippi River; soil maps and reports. TT 0.8: P 0.8: RC 0.8: D 0.8. May 1913 to July 1915 Prin. Asst. City Engr. of Jackson, supervising construction and assisting in design of sidewalks, sewers, pavements and bridges. TT 2.2: P 2.2: RC 2.2: D 1.2. July 1915 to July 1916 Asst. City Engr., Miami, Fla., transit survey to monument city, Paving Inspector and Asst. in design of sewers and structures, supervising macadam road construction. July 1916 to July 1918 Asst. Engr., Yellowstone Park, in charge of section of road and bridge construction and maintenance; also 1st Lieut., Engr. Corps, U. S. Army (Reserves). TT 3: P 3: RC 3: D 1. July 1918 to Jan. 1919 Civ. Engr., National Park Service, in direct charge (under Chf. Engr.), of construction and maintenance of roads and bridges in Yellowstone National Park. Jan. to Feb. 1919 Constr. Supt. for Hoadley Stewart, Saginaw, Mich., on erection of steel bridges. TT 0.7: P 0.7: RC 0.7. Feb. 1919 to Aug. 1922 with Montana State Highway Comm., successively as Chf. Draftsman, Constr. Engr. and Dist. Engr., on location, design and construction of highways and bridges. TT 3.6: P 3.6: RC 3.6: D 3.6. Aug. 1922 to May 1926 with Missouri State Highway Dept., on location, design and construction of highways and bridges, 9 months as Div. Engr., then Engr. of Constr. and finally Chf. of Constr. TT 3.8: P 3.8: RC 3.8: D 3.8. May 1926 to date City Engr., St. Joseph, Mo., in charge of design and construction of parks, boulevards, etc. TT 1: P 1: RC 1: D 1. TT 20.3: SP 2.4: P 17.9: RC 15.1: D 11.4. Refers to R. C. Barnett, J. T. Carmichael, J. N. Edy, H. W. Holmes, M. C. Huckaby, H. H. Lotter, H. P. Mobberly, B. H. Piepmeyer, R. D. Rader, A. R. Young.

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(5) STAUFFEN, FREDERICK CHARLES, Assoc. M., 401 Lake Ave., Baltimore, Md. (Elected Oct. 14, 1919.) (Age 36. Born Baltimore, Md.) 1909 graduate, Baltimore Pol. Inst. Oct. 1920 to March 1921 student in A. C. Elec. Eng., Johns Hopkins Univ. Jan. 1910 to Jan. 1913 Draftsman, Baltimore & Ohio R. R., on track layouts, estimates, etc. TT 3: SP 3. Jan. 1913 to Feb. 1914 Draftsman and Estimator, Western Maryland Ry., on surveys, also acted as Rodman and Recorder. TT 1.1: SP 1.1. Feb. 1914 to March 1915 Field Asst. and Draftsman on new map of Baltimore City, made estimates for proposed streets and boulevards. TT 1.1: SP 1.1. April to Sept. 1915 Draftsman-Computer, on valuation, Chesapeake & Ohio Ry. TT 0.5: SP 0.5. Oct. 1915 to June 1916 Draftsman, Western Maryland Ry. TT 0.7: SP 0.7. June 1916 to June 1917 Senior Transitman, M. of W., B. & O. R. R., in charge track location and estimates, spiraling curves, making bridge situation plans, running property surveys, designing and installing sewer system at Mt. Clare Yards, etc. TT 1: P 1: RC 1. June 1917 to March 1922 with Union Shipbuilding Co., until June 1919 as Field Engr. and Asst. Mgr., Constr., building wood and concrete shipways, waterways, concrete bulkheads, concrete runways with pile foundations, concrete pile foundations for steel and brick warehouse (80 by 260 ft.) with 10-ton traveling crane and mold loft; tracks, switches, grading, dredging, installing machinery and foundations, sewers, furnaces, building pier (40 by 504 ft.) with track, and track for 15-ton traveling crane, four smaller piers, shop, office building; built roads and maintained pipe-lines, sewers, drains, tanks, furnaces and buildings; after June 1919 Plant Engr. on design, construction and maintenance, pier (50 by 800 ft.), smaller pier, bulkhead for 4 800-ton marine railway, dredging, moving steel mill building (50 by 150 ft.) ¼ mile, design and erection of runways, buildings, foundations (all on piling) for 4200-ton structure over shipways, erection of same with 86-ft. span bridge cranes (total since 1917 \$5 000 000). TT 4.8: P 4.8: RC 4.8: D 3.8. March 1922 to June 1923 Engr. and Contr., on design and construction of houses, garages, etc. TT 1.2: P 1.2: RC 1.2: D 1.3. June 1923 to date Supt., Constr., and at present Gen. Supt., Union Shipbuilding Co., on design and construction of new type marine railway (patented) for hauling out ship bottoms after scrapping; design of foundations and installation of two large scrap shears, handling material with pulpit controlled 2-trolley bridge cranes; design and construction of reinforced concrete tunnel (1 000 ft. long), steel towers for cooling system, 30-m. oxygen plant, etc. TT 3.8: P 3.8: RC 3.8: D 3.8. TT 17.2: SP 6.4: P 10.8: RC 10.8: D 8.8. Refers to H. C. Booz, W. F. Carson, H. A. Lane, C. P. McCausland, A. McKinley, W. W. Varney.

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(1) **TOWLE, FOSTER**, Assoc. M., Quebradillas, Porto Rico. (Elected Junior Oct. 30, 1906; Assoc. M. Feb. 4, 1914.) (Age 44. Born South Hampton, N. H.) 1906 S. B., and 1907 A. B., Harvard Univ. TT 2: SP 2. June 1906 to Jan. 1907 Rodman, Board of Water Supply, New York City. TT 0.5: SP 0.5. Jan. to July 1907 Eng. Aid, July 1907 to Jan. 1921 Asst. Engr., and Jan. 1921 to March 1924 Engr., U. S. Reclamation Service, acting as Div. Engr., Engr. in charge of construction of canals and laterals, canal structures, etc.; work included design, maintenance, operation of canals, etc., surveys, investigations, stream gauging, general office work, etc., on various projects in Montana, California and Washington (detailed statement given in application). TT 17.2: SP 0.5: P 16.7: RC 15: D 2.9. April 1924 to April 1927 Designing Engr., Isabella Irrigation Service, Govt. of Porto Rico. TT 3: P 3: RC 3: D 3. TT 22.7: SP 3: P 19.7: RC 18: D 5.9. Refers to A. H. Ayers, L. V. Branch, R. M. Conner, H. J. Gault, R. A. Gonzalez, B. E. Hayden, A. S. Lucchetti-Otero, W. H. Nalder, H. N. Savage, R. M. Snell, C. P. Williams.

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(11) **VAN ALSTINE, ROY DANIEL**, Assoc. M., 852 Elm Ave., Long Beach, Cal. (Elected Feb. 25, 1924.) (Age 38. Born Mitchell, S. Dak.) 1912 A. B. in Civ. Eng., Stanford Univ. TT 2: SP 2. 1912 to 1918 Draftsman, Los Angeles Harbor Dept., drafting and design, concrete wharf construction, inspecting. TT 6: P 6: D 3. 1918 to 1921 Chf. Draftsman, Plant Dept. (2 years), and Plant Engr. (1 year), Southwestern Shipbuilding Co., in charge of design for plant construction and equipment, supervision of construction. TT 3: P 3: RC 3: D 3. 1921 to 1923 Deputy City Engr., Long Beach, in charge of engineering design and surveys and of Bldg., Plumbing and Elec. Depts. TT 1.8: P 1.8: RC 1.8. 1923 to date Director of Public Service and City Engr., Long Beach, in charge of engineering design, construction and maintenance, including pavements, sewers, storm drains, sewage disposal, bridges, buildings, seawalls, dredging, parks, garbage and refuse collection and disposal, street cleaning and maintenance, building, plumbing and electrical inspection, street lighting design and construction. TT 4.2: P 4.2: RC 4.2. TT 17: SP 2: P 15: RC 9: D 6. Refers to S. A. Jubb, W. T. Knowlton, P. G. Laurson, C. T. Leeds, J. W. Ludlow, A. M. Raw, H. A. Van Norman, E. D. Vincent.

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(9) **WARING, FREDERICK HOLMAN**, Assoc. M., 275 Acton Rd., Columbus, Ohio. (Elected Junior May 7, 1913; Assoc. M. Sept. 9, 1919.) (Age 36. Born Saratoga, N. Y.) 1912 B. S. in S. E., Worcester Pol. Inst. TT 2: SP 2. June 1912 to March 1914 Asst. Engr. with Metcalf & Eddy, Cons. Engrs., Boston, Mass., at Cincinnati, Ohio, on field studies on sewage disposal investigations and effect of sewage disposal on water supplies from Ohio River, report on sewerage plans, etc. TT 1.7: P 1.7: RC 0.8. March to Aug. 1914 Asst. Engr. with Pollard & Ellms, Cons. Engrs., Cincinnati, O., field studies on nuisance investigations, small water-works design studies. TT 0.4: P 0.4. Aug. to Dec. 1914 Asst. Engr., Cleveland, Cincinnati, Chicago & St. Louis Ry., Cincinnati, valuation studies, bridge and maintenance-of-way structures. TT 0.4: P 0.4. Dec. 1914 to Jan. 1916 Filtration Chemist, U. S. Govt., Panama Canal Zone, at Mt. Hope and Miraflores Filtration Plants. TT 1.1: P 1.1: RC 0.8. Jan. 1916 to 1920 Asst. Engr., 1920 to 1926 Prin. Asst. Engr., and April 1926 to date Chf. Engr., Ohio State Dept. of Health, supervising operation of water and sewage-treatment plants, reviewing and making recommendations on plans for water-works and sewerage projects; stream pollution studies; typhoid fever investigation, etc. TT 11.4: P 11.4: RC 9. TT 17: SP 2: P 15: RC 19.6. Refers to E. G. Bradbury, P. Burgess, W. H. Dittoe, J. W. Ellms, J. E. Root, E. K. Ruth, H. W. Streeter.

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(2) **WHITE, BENJAMIN**, Assoc. M., 11 Beacon St., Boston, Mass. (Elected April 12, 1926.) (Age 37. Born in Russia.) 1913 C. S., Mass. Inst. Tech. TT 2: SP 2. 1914 to 1915 with H. P. Converse & Co., on Hanover St. Bridge, Baltimore, Md., estimating quantities of work completed, checking materials, keeping records of piles driven, etc. TT 1.8: P 1.8. 1915 to 1916 Bridge Designer, State Roads Comm., Baltimore, design and detail of reinforced concrete bridges. TT 0.8: P 0.8: D 0.8. 1916 to 1917 with Deverell Spencer Co., Engrs. and Contrs., Baltimore, design, drafting, detailing buildings for industrial plant for Mathieson Kalk Works, Saltville, Va. TT 0.5: P 0.5: D 0.5. 1917 to 1918 tracing, drafting, detailing on war emergency work for Stone & Webster Co. TT 0.8: P 0.8. 1918 design and detailing, shipways, piers, trestles, highway bridge for shipyard, Portsmouth, N. H., for National Eng. Corporation, Boston, Mass. TT 0.8: P 0.8: D 0.8. 1919 to 1920 drafting, detailing, Squad Chf. in charge of design, drafting, detailing and checking plans, industrial buildings for Aberthaw Constr. Co., Boston. TT 1: P 1: RC 0.4. 1920 to date general contracting as White Constr. Co., Boston, including Beth El Hebrew School, Dorchester, Washington Heights Garage (350 cars) Brighton; foundation and relin-

forced concrete floor (first floor only) for five apartment houses, Boston, sales and service station, Sanford Motor Truck Co., five garages (one reinforced concrete, 650 cars), blocks of stores, dance hall, bowling alleys, remodeling a furniture warehouse, etc., and at present building Riverside Theatre, Medford, Mass. *TT 6.9: P 6.9: RC 6.9. TT 14.7: SP 2: P 12.7: RC 7.4: D 2.1.* Refers to E. F. Allbright, L. A. Estes, H. A. Gray, M. Linenthal, G. M. Tompson.

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(10) WIEDEMAN, HERMAN FREDERICK, Assoc. M., P. O. Box 1878, Atlanta, Ga. (Elected Oct. 9, 1917.) (Age 38. Born Schenectady, N. Y.) 1912 C. E., Rens. Pol. Inst. *TT 2: SP 2.* June to Sept. 1911 Constr. Draftsman on shops at Watervliet, N. Y., and June to Oct. 1912 Rodman, Delaware & Hudson R. R. Co. *TT 0.3: SP 0.3.* Oct. 1912 to Sept. 1913 Transitman, Toledo & Ohio Central Ry. and Zanesville & Western Ry. *TT 1: SP 1.* Sept. 1913 to Feb. 1914 Instrumentman, Chicago & Eastern Illinois Ry. *TT 0.4: SP 0.4.* Feb. 1914 to March 1915 Engr., Aluminum Co. of America, in charge of construction of factory buildings, water, sewer and gas lines on a \$2 000 000 project under direction of Field Engr. at Massena, N. Y. *TT 1: P 1: RC 1.* March to June 1915 Engr. for Solomon, Norcross & Keis, on construction surveys and plans for water supply for Watervliet. *TT 0.2: P 0.2.* June to Sept. 1915 Inspector of structural steel and concrete for U. S. Aluminum Co. on construction of a manufacturing plant at Edgewater, N. J. *TT 0.2: P 0.2.* Sept. 1915 to March 1917 Res. Engr. for Solomon, Norcross & Keis, in charge of construction, Franch Mills Dam (section of Watervliet water supply, total cost \$670 000). *TT 1.5: P 1.5: RC 1.5.* March 1917 to May 1918 Engr., Solomon-Norcross Co., in charge of surveys, plans and construction, street paving for Barnesville and Griffen, Ga. *TT 0.7: P 0.7: RC 0.7: D 0.7.* May to Dec. 1918 in Government service. Jan. 1919 to May 1925 with P. H. Norcross, Atlanta, until Jan. 1921 as Asst. Engr. on reports, surveys, designs of pavements, water-works, sewers and sewage-disposal, appraisal and valuations of public utilities; then Prin. Asst. Engr. in charge of design and construction of water-works, sewers and sewage-disposal works. *TT 6.3: P 6.3: RC 2.8: D 2.8.* May 1925 to Jan. 1927 member of firm, Solomon-Norcross Co., general consulting work in civil, sanitary and hydraulic engineering. *TT 1.7: P 1.7: RC 0.9: D 0.9.* Jan. 1927 to date member of firm, Wiedeman & Singleton, San, and Hydr. Engrs. (Successors to Paul H. Norcross). *TT 0.6: P 0.6: RC 0.6. TT 16: SP 3.7: P 13.3: RC 7.5: D 4.4.* Refers to R. S. Fliske, G. W. Fuller, J. H. Johnston, C. E. Kauffmann, F. H. McDonald, M. T. Singleton.

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(1) YANG, PAO-LING, Assoc. M., Chihli River Comm., Tientsin, China. (Elected July 6, 1920.) (Age 39. Born Soochow, China.) 1911 B. S. in Civ. Eng., Purdue Univ. *TT 2: SP 2.* 1912 to 1913 Asst. Engr. in charge of Huai River Surveys. *TT 1: P 1: RC 1.* 1913 to 1914 Prof. of Civ. Eng., Hunan Technical Coll. *TT 1: P 1: RC 1.* 1914 to date Chf. Technical Expert, Govt. Conservancy Board. Also, 1917 to 1918 Adviser, Directorate-General of Flood Relief and Conservancy; 1918 to 1920 member, Eng. Dept., Grand Canal Improvement Board; since 1918 member, Comm. for Improvement of River System of Chihli (Chihli River Comm.); since 1920 Adviser, Kiangsu Grand Canal Board, and Kiangsu Ta Hu Conservancy Board; since 1922 Chairman, Technical Committee, Yangtse River Comm.; 1923 to 1924 and since 1926 Acting Chf. Engr., Chihli River Comm.; 1925 to 1926 Asst. Chf. Engr., and Engr.-in-Chg., Directorate-General for Repairs of Yung Ting Ho Breaches. *TT 13: P 13: RC 13. TT 17: SP 2: P 15: RC 15.* Refers to J. W. Beardsley, J. R. Freeman, R. D. Goodrich, K. Y. Kwong, H. A. Raider, H. van der Veen.

FROM THE GRADE OF JUNIOR

1114

(11) ALEXANDER, LOUIS JESSUP, Jun., 124 Flower St., Lynwood, Cal. (Elected March 12, 1923.) (Age 30. Born Cuba, N. Y.) 1922 B. S. in Arch. Eng., Univ. of Ill. *TT 2: SP 2.* 1917 Draftsman, Wm. E. Hampton Co., at Camp Kearney. *TT 0.5: SP 0.5.* 1917 to 1919 with U. S. Navy; commissioned in Oct. 1918 and handled telegraphic and radio communication, 12th Naval Dist. *TT 1.9: P 1.9.* 1921 Draftsman with John & Donald Parkinson, Archts., Los Angeles, on structural steel details. *TT 0.3: P 0.3.* 1920 and 1921 (about 8 months) Draftsman and office work, and 1922 to Jan. 1925 Asst. Engr. in charge of surveys, design and construction of municipal water systems, all for J. B. Lippincott, Los Angeles, Cal. *TT 3.1: P 3.1: RC 1.5: D 1.* Feb. to Oct. 1925 Asst. Engr. in charge of surveys, design and construction, Vista Irrigation Dist. *TT 0.8: P 0.8: RC 0.8.* Nov. 1925 to Jan. 1926 Foreman for Contr. in charge of guniting canals for Salt River Water Users Association. *TT 0.3: P 0.3: RC 0.3.* Feb. to April 1926 Designing Draftsman on sewers for refinery, Union Oil Co. *TT 0.2: P 0.2.* April 1926 to date Asst. Engr. with Reaburn & Bowen, Cons. Engrs.,

in charge of design and construction of irrigation and municipal water systems. *TT 1: P 1: RC 1: D 1. TT 10.1: SP 2.5: P 7.6: RC 3.6: D 2.* Refers to E. R. Bowen, G. Cromwell, F. W. Karge, J. B. Lippincott, F. A. Noetzli, D. L. Reaburn, K. Q. Volk, C. P. Williams.

1115

(2) **BACKES, EDWARD WILLIAM**, Jun., 2 Wolcott Terrace, Winchester, Mass. (Elected Oct. 2, 1922.) (Age 25. Born New York City.) 1920 C. E., Pa. Mil. Coll. 1922 C. E., Yale Univ. *TT 2: SP 2.* Aug. 1922 to April 1927 with Havana Elec. Ry., Light & Power Co., until March 1925 as Inspector on bridge construction; turbo-generator foundations and miscellaneous building construction, then Asst. Engr. in charge of construction and maintenance of all tracks (about 100 miles). *TT 4.7: SP 2.6: P 2.1: RC 2.1: D 1.* May 1927 to date Gen. Foreman, Boston & Maine R. R., on construction of freight yard in connection with terminal improvements. *TT 0.2: P 0.2: RC 0.2. TT 6.9: SP 4.6: P 2.3: RC 2.3: D 1.* Refers to W. J. Backes, H. C. Bird, C. Gilman, M. A. Rue, G. P. Seeley, Jr., C. J. Tilden, R. S. Webster.

1116

(1) **BAEZ RODRIGUEZ, ENRIQUE**, Jun., Box 1384, San Juan, Porto Rico. (Elected July 9, 1923.) (Age 31. Born Mayaguez, Porto Rico.) 1918 B. S. in Civ. Eng., Coll. of Agri. and Mech. Arts, Univ. of Porto Rico. *TT 2: SP 2.* July 1918 to Sept. 1919 with J. Ramirez, C. E., designing and in charge of construction of small concrete structures. *TT 1.2: P 1.2: RC 0.5: D 0.7.* Aug. 1920 to April 1924 with Dept. of Interior, San Juan, Porto Rico, 5 months as Inspector on construction of macadam road, then Asst. Engr., Div. of Municipal Works, designing and inspecting construction of hydro-electric plants, sewer systems, water works and parks. *TT 3.6: P 3.6: RC 2: D 1.6.* Aug. 1924 to date Contr. and Bldr., on design, specifications, valuations and construction of concrete structures, principally bungalows, apartment houses, etc., real-estate improvements; construction of sewer systems for municipalities of Yabucoa and Loiza, and for Insular Leper Colony, including Imhoff tanks, sand filters, dosing chamber and chlorinator house, also miscellaneous contracts with Dept. of Interior, Govt. of Porto Rico, San Juan, Porto Rico. *TT 2.5: P 2.5: RC 1.5: D 1. TT 9.3: SP 2: P 7.3: RC 4: D 3.3.* Refers to M. V. Domenech, M. Font, R. Ramirez, E. Totti y Torres, C. del Valle Zeno.

1117

(11) **BINCKLEY, SYDNEY WILLIAM**, Jun., 1247 North La Brea Ave., Los Angeles, Cal. (Elected July 6, 1925.) (Age 28. Born Butte, Mont.) Sept. 1917 to Aug. 1918 with Southern California Edison Co., on Kern River Project No. 3, until June 1918 as Rodman and Chainman on tunnel work, then Shift Boss on construction of diversion dam. *TT 1: SP 1.* Aug. to Dec. 1918 at California Inst. of Technology, training for commission in Engr. Reserve Corps, U. S. Army. Dec. 1918 to March 1919 Chainman, Southern California Edison Co. *TT 0.5: SP 0.5.* March 1919 to March 1920 Asst. Chemist and Draftsman, and March 1920 to March 1921 Asst. Engr. and Draftsman, Union Sugar Co., Bitteravia, Cal., remodeling sugar factory. *TT 2: SP 2.* March to Nov. 1921 Res. Engr. with George S. Binckley, Los Angeles, in full charge of remodeling of five sugar mills in state of Jalisco, Mexico, and technical direction of sugar production at Centrals Bellavista, San Marcos, San Francisco, Queseria, and La Purissima. *TT 0.7: P 0.7: RC 0.7.* Nov. 1921 to July 1923 with Southern California Gas Co., locating gas mains, until June 1922 as Chf. of Party, then in charge of eight parties. *TT 1.7: P 1.7.* July 1923 to June 1924 Res. Engr. with George S. Binckley, in charge of triangulation of 6 000-acre tract, topographical surveys, road locations, soil and meteorological studies and irrigation problems. *TT 0.9: P 0.9: RC 0.9.* June 1924 to March 1925 Chf. of Party, Southern California Gas Co. *TT 0.8: P 0.8.* March 1925 to June 1926 on inventory of property of Midway Gas Co. (\$10 000 000), Los Angeles, until July 1925 as Asst. to Field Engr. in charge supervising inventory crews, then Engr. in charge of all field work. *TT 1.3: P 1.3: RC 1.* July 1926 to date Engr. in charge of detailed inventory of properties of Southern California Gas Co. (\$35 000 000), including full charge of complete appraisal of part (about \$1 000 000) and assisting Chf. Engr. of Valuation Dept. in rate studies, financial analyses, etc. *TT 0.9: P 0.9: RC 0.9. TT 9.8: SP 3.5: P 6.3: RC 3.5.* Refers to G. S. Binckley, J. W. Cleland, G. C. Fitzgerald, H. Hawgood, H. C. Mower.

1118

(5) **BRYANT, CHARLES BYRN**, Jun., 4501 Maine Ave., Forest Park, Baltimore, Md. (Elected Dec. 14, 1925.) (Age 26. Born Washington, D. C.) 1922 B. S. in Chem. School of Eng., Johns Hopkins Univ. *TT 2: SP 2.* June 1922 to date Field Engr., Portland Cement Association, research testing, educational and promotional work for concrete paving and building construction. *TT 4.8: P 4.8: RC 3. TT 6.8: SP 2: P 4.8: RC 3.* Refers to W. P. Darwin, H. R. Hall, G. A. Ricker, B. H. Wait, G. E. Warren.

1119

(10) **CHRISTIAN, FRANCIS GRIFFITH**, Jun., Box 623, Badin, N. C. (Elected Oct. 12, 1925.) (Age 28. Born Ishpeming, Mich.) 1921 B. S. in Mech. Eng., and 1922 B. S. in Civ. Eng., Univ. of Mich. *TT 2: SP 2.* July to Sept. 1918 Draftsman, Computer and Rodman, Cleveland Cliffs Iron Co., Ishpeming, Mich. March to July 1922 Draftsman, James Leffel Co., Springfield, Ohio, on shop drawings for water turbines. *TT 0.3: SP 0.3.* July 1922 to March 1923 with Charles B. Hawley & Co., as Draftsman and Computer on hydro-electric preliminary investigations on Youghiogheny River at Oakland, Md. (6 months), and at Washington, D. C., preparing data for report (over 2 months). *TT 0.7: SP 0.7.* March 1923 to April 1924 with Gen. Constr. Corporation, Charles B. Hawley & Co., Agts., on hydro-electric construction, Clarion River, Pa., being Asst. Engr. in charge of concrete inspection at mixer plant and forms; in charge of laboratory for testing concrete and concrete aggregates; in charge bending reinforcing steel; estimates. *TT 1.1: P 1.1: RC 1.1.* April 1924 to March 1925 with Charles B. Hawley & Co., Cumberland Falls, Ky., as Draftsman, Computer, Stream Gauger and office work on preliminary investigation for hydro-electric development on Cumberland River, including railroad preliminary survey and location. *TT 0.9: SP 0.4: P 0.5.* March to May 1925 with Gen. Constr. Corporation, Charles B. Hawley & Co., Agts., Oakland, as Computer and Draftsman on property work for development of hydro-electric plant on Youghiogheny River. *TT 0.2: SP 0.2.* May to Sept. 1925 with City Engr.'s office, Saginaw, Mich., as Draftsman and Computer working up estimates and quantities for paving streets, sewer construction inspection, assessment maps. *TT 0.3: SP 0.3.* Sept. 1925 to date Asst. Engr., Tallahassee Power Co., Badin, N. C., in charge of Drafting Room, Property Dept., computations and maps for large hydro-electric development on Yadkin River, designs for revision of Badin filter plant; designs and plans for houses, barns, etc.; preliminary designs, estimates and plans for relocating 5 miles W. S. S. Ry.; plans, designs and estimates for highway relocation involving seven major bridges and two large culverts (under construction) and for revision of water supply for pump station and appurtenances and community for cotton; similar work for Salisbury, N. C., water-supply pumping station. *TT 1.7: P 1.7: RC 1.7: D 1.2.* *TT 7.2: SP 3.9: P 3.3: RC 2.8: D 1.2.* Refers to C. B. Hawley, W. C. Hoad, H. W. King, B. S. Philbrick, H. V. Schreiber, D. C. Walsler, C. O. Wisler.

1120

(6) **CLARK, CLAIR LOUIS**, Jun., 869 Thirty-Seventh St., Altoona, Pa. (Elected Aug. 28, 1922.) (Age 30. Born New Brighton, Pa.) 1921 B. S., Pa. State Coll. *TT 2: SP 2.* June 1915 to Sept. 1916 Cost Accountant on steel cars and track material, Orenstein Arthur Koppel Co., Koppel, Pa. *TT 1.3: SP 1.3.* Summers 1917, 1918 and 1920 Structural Steel Detailer, Pittsburgh Bridge & Iron Works, Rochester, Pa. Nov. 1918 to Sept. 1919 Asst. to Executive Officer, Constr. Div., U. S. Army, Frankford Arsenal Project, Philadelphia, Pa., surveying, soil tests, progress charts and plans. *TT 0.8: SP 0.8.* Sept. to Oct. 1921 Draftsman with C. F. Clark, New Brighton, Pa., on design of brick store-room and apartment. *TT 0.1: SP 0.1.* Jan. 1922 to date Engr., Blair Home Co., Altoona, Pa., on subdivisions, housing, industrial buildings and property surveys. *TT 5.4: P 5.4: RC 3.9: D 1.5.* *TT 9.6: SP 4.2: P 5.4: RC 3.9: D 1.5.* Refers to F. J. Householder, W. A. Hoyt, W. L. Martin, R. O'Donnell, A. Richards, R. L. Sackett, E. D. Walker.

1121

(8) **CRAIG, WALLACE DEWEY**, Jun., 729 Hearst Bldg., Chicago, Ill. (Elected June 16, 1924.) (Age 29. Born Omaha, Nebr.) 1923 B. Sc. in C. E., Univ. of Nebr. *TT 2: SP 2.* Summer 1914, June 1915 to Jan. 1916 and Summer 1917 Rodman, successively with City of Calgary, Alberta, Canada, Canadian National R. R., and with U. S. Govt. at Ft. Omaha, Nebr. *TT 0.6: SP 0.6.* Summer 1918 Checker on appraisal of Omaha Gas Plant. Summer 1921 Rodman, Canadian Pacific R. R. Summer 1922 Inspector, Douglas County, Nebr., on highways, paving. June 1923 to Jan. 1924 Res. Engr. with Bruce & Grupe, Cons. Engrs., Omaha, on paving at Scribner, Nebr., and on sewer, drainage ditch and disposal plant at Plainview, Nebr. *TT 0.7: P 0.7: RC 0.7.* Jan. 1924 to May 1925 Engr. and Draftsman, Metropolitan Utilities Dist., Omaha, on water and gas construction and designing. *TT 1.3: P 1.3: RC 1: D 1.* May 1925 to date Field Engr., The Asphalt Association, Chicago, Ill., consulting on pavement design and specifications and lecturing. *TT 2: P 2: RC 2: D 2.* *TT 6.6: SP 2.6: P 4: RC 3.7: D 3.* Refers to J. A. Bruce, G. L. Campen, J. B. Hittell, H. V. Knouse, C. E. Mickey, H. W. Skidmore.

1122

(12) **CURRY, BYRON KENNETH**, Jun., Box 625, Lewiston, Idaho. (Elected Aug. 4, 1924.) (Age 27. Born Willmar, Minn.) 1923 B. S. in C. E., Univ. of Minn. *TT 2: SP 2.* Vacations 1922 and 1923 Rodman, Chairman and Draftsman with J. E. Hill, Civ. Engr., Minneapolis, Minn. June 1923 to Jan. 1924 Civ. Engr., The Sandusky Cement Co., Dixon, Ill., in charge of topographic survey and mapping of quarry properties, designed and super-

vised installation of drainage system for 360 acres, etc. *TT 0.5: P 0.5: RC 0.5: D 0.2.* Jan. to Feb. 1924 construction field work, on Ford plant, H. C. Struchen Co., St. Paul, Minn. *TT 0.1: P 0.1.* Feb. to March 1924 in charge of field location work on Donaldson Bldg., Minneapolis, for J. E. Hill, Civ. Engr. *TT 0.1: P 0.1: RC 0.1.* March 1924 to date with Fegles Constr. Co., Ltd., Minneapolis, successively on grain elevator, reinforced concrete and structural steel design (over ½ year), then on preliminary work, design and (1 year) Engr. on construction of Robert St. Bridge over the Mississippi at St. Paul, being responsible for field location, estimates, falsework, and other plant designs, and (since Feb. 1926) on quantity survey and Engr. on construction of Lewiston (Idaho) hydro-electric development, being responsible for plant design and location, including bridges, trestles, cableways, aggregate manufacturing and concrete plant, industrial railways, etc., estimates on unit price contract, materials, preparation of hydrological and meteorological data and records. *TT 3.3: P 3.3: RC 2.1: D 1.5. TT 6: SP 2.1: P 3.9: RC 2.7: D 1.7.* Refers to F. Bass, D. W. Cole, A. S. Cutler, D. B. Fegles, C. D. Forsbeck, M. W. Hewett, O. M. Leland.

1123

(1) **de MENEZES, GODOFREDO MORAES**, Jun., Caixa Postal No. 19, Rio de Janeiro, Brazil. (Elected Feb. 25, 1924.) (Age 31. Born Aracaju, Sergipe, Brazil.) 1923 C. E. Lehigh Univ. *TT 2: SP 2.* June to Aug. 1923 Draftsman, Bethlehem (Pa.) Fabricators, Inc. Aug. 1923 to date with American Rolling Mill Co. and (its successor) Armco International Corporation of Rio de Janeiro, since Jan. 1924 in charge of all engineering work. *TT 4: P 4: RC 3. TT 6: SP 2: P 4: RC 3.* Refers to S. A. Becker, R. J. Fogg, M. O. Fuller, H. G. Payrow, L. M. Sandston, W. L. Wilson.

1124

(1) **GOLDMAN, BENJAMIN SHEPPARD**, Jun., 932 Eastern Parkway, Brooklyn, N. Y. (Elected April 3, 1922.) (Age 26. Born New York City.) 1920 B. S., Coll. of City of N. Y. 1921 C. E., Pol. Inst. of Brooklyn. *TT 2: SP 2.* Nov. 1921 to Feb. 1922 Axeman, and Instrumentman, Dept. of Parks, Brooklyn, N. Y. *TT 0.2: SP 0.2.* March to June 1922 Rodman and Instrumentman, Dept. of Docks, New York City. *TT 0.2: SP 0.2.* June 1922 to Sept. 1923 with Board of Water Supply, New York City, 1 year as Transitman, being Chf. of Party, in charge of 5 miles of Shandaken (N. Y.) Tunnel, then Inspector on preliminary survey of Tannersville-Hunter sanitary sewer project. *TT 1.2: SP 1.2.* Sept. to Dec. 1923 Transitman, Bureau of Highways, Brooklyn, being Chf. of Party on street layouts and surveys. *TT 0.2: SP 0.2.* April to Dec. 1926 Gen. Supt. of Constr., Rocklin Operating Co., in charge of all construction operations (\$2 500 000). *TT 0.7: P 0.7: RC 0.7.* Dec. 1923 to April 1926 and Dec. 1926 to date with Bing & Bing, Inc., New York City, until Nov. 1925 as Asst. Supt. on construction of steel and concrete apartment houses and hotels and remainder of time Supt. of Constr., in charge of construction of hotels (\$4 000 000) and (since Dec. 1926) fireproof apartment houses. *TT 2.7: SP 1.1: P 1.6: RC 1.6. TT 7.4: SP 5.1: P 2.3: RC 2.3.* Refers to R. W. Gausmann, M. Grunauer, H. P. Hammond, C. W. Hudson, D. B. Steinman.

1125

(1) **HANNING, WILLIS COSINE**, Jun., 392 Sixth Ave., Brooklyn, N. Y. (Elected Jan. 15, 1923.) (Age 26. Born Brooklyn, N. Y.) 1922 C. E., Brooklyn Pol. Inst. *TT 2: SP 2.* July to Oct. 1920 Draftsman, Franklin Ry. Supply Co., New York City, drafting and taking charge of orders on a locomotive safety device. July to Oct. 1921 Cable Recorder, New York Edison Co. June 1922 to Jan. 1923 Rodman, Dept. of Water Supply, New York City, inspecting core borings, arch analysis and checking investigation of piers of High Bridge, analysis of layout and checking first designs for High Bridge reconstruction. *TT 0.6: SP 0.2: P 0.4.* Jan. 1923 to Jan. 1925 Engr. Inspector, Bureau of Highways, Borough of Queens, testing concrete materials and reinforcing steel, and in charge of design of concrete mixes for Jamaica Bay Boulevard and first section of Rockaway Trunk Sewer. *TT 2: P 2: RC 0.5.* Jan. 1925 to date Asst. Engr. and Inspector, Bureau of Bldgs., Borough of Brooklyn, N. Y., 1 year examining plans and checking structural strength of timber, masonry, steel and reinforced concrete structures, and since then in charge of inspection of erection and alteration of all structures in district (2 sq. miles). *TT 2.5: SP 0.3: P 2.2: RC 2. TT 7.1: SP 2.5: P 4.6: RC 2.5.* Refers to H. P. Hammond, T. B. Rights, W. Rowland, G. A. Schaefer, J. D. Schwartz, E. J. Squire.

1126

(1) **KRUEGER, HERMAN JOHN**, Jun., 191 Sherman Ave., Jersey City, N. J. (Elected May 28, 1923.) (Age 30. Born Newark, N. J.) 1923 B. S. in Civ. Eng., Cooper Union. Dec. 1917 to June 1919 Corporal, 25th Regt., U. S. Engrs.; from March to May 1918 on St. Suipice Storage Project, France, checking material and making progress reports; June to Sept. 1918 at La Pallice Depot, France, in charge (under Lt. R. S. Tilden, 25th Engrs.) of construction materials and distribution for cantonment, etc. Sept. 1918 to

Jan. 1919 in Argonne Forest, field engineering, in charge of materials for relief quarters at Montfaucon, and for wooden frame buildings at Chattencourt and Dun sur Meuse and prison camps at Mare and Varennes (under Capt. Tilden); also in charge of men on construction; Jan. to May 1919 at Camp Pontanezen, Brest, railroad work in charge of labor detail laying narrow-gauge track, and Chf. Draftsman, Pontanezen R. R. *TT 1.5: SP 1.1: P 0.4: RC 0.4.* June 1919 to date Asst., Bridge and Bldg. Dept., U. S. Steel Products Co., New York City, contracting engineering; associated with designing, estimating and contracting for fabricated structural steel, such as bridges, buildings, tanks, towers, etc. for export. *TT 8: SP 3: P 5: RC 8.* *TT 9.5: SP 4.1: P 5.4: RC 8.4.* Refers to F. E. Foss, W. G. Grove, O. E. Hovey, H. L. Jones, J. E. Wadsworth.

1127

(1) **LAVINE, ELLIS LEWIS**, Jun., 210 West 101st St., New York City. (Elected Feb. 25, 1924.) (Age 28. Born North Creek, N. Y.) 1920 C. E., Rens. Pol. Inst. *TT 2: SP 2.* Summer 1918 Line Inspector, Western Union Tel. Co., Pittsburgh, Pa., on surveys and estimates. July to Nov. 1920 Res. Engr., New York State Highway Dept., in charge of erection of 300-ft. single-span steel highway bridge at Riverside, N. Y. *TT 0.4: P 0.4: RC 0.4.* Nov. 1920 to Aug. 1921 Detailer and Supt., A. Perlman Iron Works, New York City, designing, detailing and supervising erection of iron work for buildings. *TT 0.7: SP 0.7: D 0.2.* Aug. 1921 to Nov. 1922 Rodman, New York Central R. R., Buffalo, N. Y., in charge of surveys and of construction of sewer drainage system in stock yards, and designing and laying out structures. *TT 1.2: SP 0.6: P 0.6: RC 0.6: D 0.4.* Nov. 1922 to Feb. 1923 Structural Steel Draftsman, Geo. A. Just Co., Long Island City, N. Y., designing and detailing structural steel for buildings. *TT 0.2: SP 0.2: D 0.1.* Feb. to Aug. 1923 Gen. Supt., 326 East 46th St. Corporation, New York City, in charge of construction of 2-story fireproof garage (150 by 100 ft.) *TT 0.5: P 0.5: RC 0.5.* Aug. to Nov. 1923 Asst. Supt. of Constr., Werbolosky & La Vine Realty Co., Brooklyn, N. Y., on erection of an apartment house. *TT 0.3: SP 0.3: RC 0.1.* Nov. 1923 to Aug. 1925 Gen. Constr. Supt., James Conforti Constr. Co., New York City, in charge of residential and commercial work, including motion picture studio (\$1 000 000), steel and concrete building, doing underpinning, masonry, fireproofing, etc. *TT 1.7: P 1.7: RC 1.7.* Aug. 1925 to March 1926 Gen. Mgr., Coastal Co., Inc., Gen. Contrs., Miami, Fla., soliciting, estimating and supervising on reinforced concrete dry-cleaning plant, glass warehouse, stores, apartments, etc. *TT 0.6: P 0.6: RC 0.6.* March to May 1926 Asst. Supt., Nard Corporation, New York City, on foundation work for 24-story office building, reinforced concrete spread footings. *TT 0.2: P 0.2: RC 0.1.* May to Dec. 1926 Supt. of Constr., Elsenberg & Settel, Inc., New York City, in charge of construction of 16-story office building. *TT 0.6: P 0.6: RC 0.6.* Dec. 1926 to Feb. 1927 Supt. of Constr., Marcus Contr. Co., New York City, in charge of foundation work for 15-story hotel. *TT 0.2: P 0.2: RC 0.2.* Feb. 1927 to date Supt. of Constr., N. Masem & Son, Brooklyn, N. Y., in charge of construction of theatre at Glen Cove, N. Y. *TT 0.3: P 0.3: RC 0.3.* *TT 8.9: SP 3.8: P 5.1: RC 5.1: D 0.7.* Refers to F. M. Beer, M. Birman, E. J. Downie, T. R. Lawson, H. W. Lesh, P. C. Ricketts, W. H. Van Gieson.

1128

(1) **McLEAN, VINCENT**, Jun., 10541 189th St., Hollis, N. Y. (Elected June 16, 1924.) (Age 31. Born Winnipeg, Man., Canada.) 1923 B. Sc. C. E., Univ. of Manitoba. *TT 2: SP 2.* 1914 (6 months) Rodman, and 1915 (6 months) Concrete Inspector, Greater Winnipeg Water Dist. *TT 1: SP 1.* 1915 to 1919 (3½ years) with Canadian Engrs., Staff Sgt., water supply and tunnel lighting for Canadian Corps Area; 1919 Lecturer on internal combustion engines, Khaki Coll. *TT 3.5: SP 3.5.* 1919 Instrumentman, Canadian Pacific Ry. *TT 0.5: SP 0.5.* 1920 to 1921 Asst. Engr., Good Roads, Springfield, Manitoba (nearly 9 months), Demonstrator, Thermo, and Hydro, laboratories, Univ. of Manitoba (nearly 5 months), and Supt., Constr., Good Roads, St. Andrews (over 7 months). *TT 1.7: SP 0.4: P 1.3.* 1922 with Canadian National Ry., Water Supply Dept., on location and proposals for surface water supply reservoirs, Chf. of Party (over 7 months), investigating economic cost of hardness in feed waters (nearly 3 months). *TT 0.8: P 0.8: RC 0.8.* 1923 to date with Western Elec. Co. New York City, 5 months as Arch. Draftsman at Hawthorne, 6 months on layout and design of power plant enlargement, 9 months drafting, steel and concrete on manufacturing buildings, 7 months on location and design of industrial trackage, 9 months Sec. Chf. on miscellaneous iron work and 9 months Structural Designer. *TT 3.8: SP 1.1: P 2.7: RC 1.4: D 1.4.* *TT 12.7: SP 8.5: P 4.2: RC 2.2: D 1.2.* Refers to E. E. Brydone-Jack, W. Burton, J. N. Finlayson, R. L. Hart, O. W. Melin, O. C. Spurling, J. G. Sullivan.

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(4) **O'REILLY, ANTHONY RAUEN**, Jun., 1337 Good St., Reading, Pa. (Elected Dec. 6, 1920.) (Age 29. Born Reading, Pa.) Registered Prof. Engr., State of Pa. June 1915 to Jan. 1916 Rodman and Transitman, Maryland State Highway. *TT 0.5: SP 0.5: D 0.5.* Jan.

1916 to Jan. 1917 Transitman and Inspector, W. H. Dechant & Son, on street paving. *TT 1: SP 1: D1.* Jan. 1917 to Aug. 1918 Civ. Engr., Carpenter Steel Co., on mill construction *TT 1.6: SP 1.6: D 1.6.* Jan. to Sept. 1919 Constr. Engr., Reading Steel Casting Co. in charge of Eng. Dept. *TT 0.7: P 0.7. RC 0.7.* Sept. 1919 to March 1920 Constr. Engr. for H. J. Raudenbush, Gen. Contr., in charge of construction. *TT 0.5: P 0.5: RC 0.5.* March 1920 to date with Bureau of Water, Reading, Pa., until Sept. 1924 as Civ. Engr. in charge of design and construction of improvements to Malden Creek Pumping Station, and since then Chf. Engr. in complete charge of the Bureau. *TT 7: P 7: RC 7. TT 11.4: SP 3.2: P 8.2: RC 8.2: D 3.1.* Refers to W. B. Nissly, E. L. Nuebling, J. P. Sartz, P. Voorhees, G. F. Wiegardt.

1130

(13) REED, OREN, Jun., San Joaquin Light & Power Corporation, Fresno, Cal. (Elected Jan. 14, 1924.) (Age 31. Born St. Paul, Ind.) 1922 B. S., and 1927 C. E., Purdue Univ. *TT 2: SP 2.* Summer 1921 Transitman, Interstate Public Service Co., Columbus, Ind., spiral curves and yard layout on interurban line. About 2 years with U. S. Army, 1½ years in France. 1922 to 1923 (over 1 year) Fellow of American Scandinavian Foundation, first 4 months at Norwegian Technical School at Trondhjem studying hydraulics, construction of dams and physics, remainder of time visited plants in central and southern Norway. *TT 1: P 1.* Sept. 1923 to date Asst. Designing Engr., San Joaquin Light & Power Corporation, Fresno, Cal., until April 1924 on computations and design for ditch work, Crane Valley System; April 1924 to March 1926 on Kings River Development, investigations, reports, estimates, and (1 year) on design of arch dam, penstock, etc., of Balch Project; March to Oct. 1926 Inspector and Company Representative during manufacture of Balch Penstock in Poland; since Oct. 1926 on investigation of minor projects and design of arch dam (Balch After-bay) (85 ft. high). *TT 3.9: SP 0.5: P 3.4: RC 1.8: D 1. TT 6.9: SP 2.5: P 4.4: RC 1.8: D 1.* Refers to H. K. Fox, W. K. Hatt, C. P. Jensen, C. L. Kaupke, W. A. Knapp, R. B. Wiley, L. O. Wolcott.

1131

(11) ROACH, ALDEN GALLUP, Jun., 1225 North Hill St., Pasadena, Cal. (Elected Dec. 15, 1924.) (Age 26. Born St. Louis, Mo.) 1923 B. S. in C. E., Univ. of Ill. *TT 2: SP 2.* June to Oct. 1918 Rodman, and April to Oct. 1921 Ballast Inspector, Wabash R. R. *TT 0.5: SP 0.5.* Summer 1920 Asst. Engr., Alton & Southern R. R., East St. Louis. Oct. 1921 to Sept. 1922 Rodman and Instrumentman, and Sept. 1923 to March 1924 Transitman, Missouri Pacific R. R. *TT 1.5: SP 0.5: P 1: RC 1.* Summer 1923 Draftsman, Union Pacific R. R. *TT 0.2: P 0.2.* March 1924 to April 1926 Plant Engr. and Acting Master Mechanic, Laclede Steel Co., St. Louis, Mo. *TT 2: P 2: RC 2: D 1.* April 1926 to 1927 Engr. and Supt., with D. C. Bowman, Engr. and Contr., St. Louis. At present with Sales Dept., Union Iron Works of Los Angeles, Cal. *TT 1: P 1: RC 1: D 0.5. TT 7.2: SP 3: P 4.2: RC 4: D 1.5.* Refers to B. L. Brown, O. F. Harting, R. H. Howard, H. J. Pfeiffer, C. C. Williams.

1132

(1) ROGERS, ALBERT WILLIAM, Jun., Sanchez, Dominican Republic. (Elected July 12, 1926.) (Age 31. Born London, England.) 1914 graduated from School of Bldg., Brixton, London, England. May to Oct. 1915 studying concrete, until Dec. 1914 with British Reinforced Concrete Co., then with Trussed Concrete Steel Co. *TT 1.4: SP 1.4.* Oct. 1915 to Jan. 1920 with H. M.'s Forces, most of time in France, 2 years in Infantry, and 2 years Lieut., Royal Engrs., on roads, bridges and building construction; 1918 bridged Scheldt River; also had charge of bridge deviation at Warneton (Lys River) for heavy guns; 1919 directed construction of concrete standings for 5 000 horses, roads and water supply at Arques; also Divisional Officer at Rouen. *TT 4: SP 2: P 2: RC 2.* Jan. 1920 to date with Samana & Santiago Ry. Co., Ltd., 2 years as Asst. Engr., then Res. Engr. in sole charge of reconstruction, including designs, of bridges and culverts, retaining walls, including one along a river bank (300 ft. long, 26 ft. high; constructed 1922), large slides, surveys, etc.; also in charge of maintenance of way and structures. *TT 7.3: P 7.3: RC 5.3: D 5.3. TT 12.7: SP 3.4: P 9.3: RC 7.3: D 5.3.* (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

1133

(5) SANTELMANN, ALFRED WILLIAM, Jun., 2456 Twentieth St., N. W., No. 407, Washington. D. C. (Elected May 28, 1923.) (Age 29. Born Washington, D. C.) 1923 B. S. E., Univ. of Mich. *TT 2: SP 2.* Feb. to Aug. 1923 Draftsman with Mr. Von Voigtlander, on design of power house. *TT 0.5: SP 0.5.* Aug. to Dec. 1923 Transitman and Computer with F. S. Childs on dam surveys. *TT 0.3: SP 0.3.* Feb. 1924 to Aug. 1926 Draftsman with C. O. Butler, Milwaukee, Wis., designed and drew plans for lighthouses, wrote specifications and bids for structural materials; partial supervision of construction. *TT 2.6: SP 0.6: P 2: RC 2.* Aug. 1926 to date Asst. Structural Engr., Superv. Archt.'s Office, Treasury Dept., Washington,

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D. C., on design of post offices and hospitals. *TT 0.8: P 0.8: D 0.8. TT 6.2: SP 3.4: P 2.8: RC 2: D 0.8.* Refers to W. S. Anderson, C. L. Boyer, F. C. Hilder, H. E. Riggs, E. K. Triol.

1134

(1) **SARAFIOGLOU, ANESTIS GEORGE**, Jun., Robert Coll., Bebek, Constantinople, Turkey. (Elected Dec. 15, 1924.) (Age 31. Born Constantinople, Turkey.) A. B. and B. Sc., Anatolia Coll., Marsovan. 1921 B. Sc. in C. E., Robert Coll. *TT 2: SP 2.* 1916 to 1918 in military service, with Automobile Regt., Chauffeur School, Mech. Draftsman, garage management and Asst. Supervisor of constructional works; design and construction of benzine depot (18 by 12, \$500), single story building (60 by 24, \$675), extended garage building for foundry and forge (\$1 100), some survey and map work, plans and estimates of buildings. *TT 2.5: P 2.5: RC 1.5: D 1.2.* 1918 to 1919 contracting with Mr. Boyadjoglou, Archt., being Asst. Estimator and Designer of extension to telephone building (reinforced concrete) and on designs of warehouses, buildings and estimates. *TT 1: P 1: RC 1.* 1919 to 1921 Asst. Mgr., Eng. Dept., Edwards & Sons, Ltd., on building plans, design and estimate of 2-story garage, and acted as Asst. to Contr. and supervised construction of reinforced concrete warehouse. *TT 2: P 2: RC 0.2: D 1.7.* 1921 to date at Robert Coll., until 1923 Asst. Supt. and Instructor in engineering mathematics, and since then Instructor in mathematics, railroad surveying and location, roads and pavements, descriptive, etc. Since 1925 also on design, estimates, supervision of construction and engineering, and on consulting work. *TT 6: P 6: RC 3.2: D 1. TT 13.5: SP 2: P 11.5: RC 6: D 4.* Refers to C. H. Sutherland, C. Terzaghi. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

1135

(15) **SCHLOM, LOUIS HENRY**, Jun., 1812 Bell Ave., Houston, Tex. (Elected Aug. 31, 1925.) (Age 27. Born Houston, Tex.) 1921 B. S., Rict Inst. *TT 2: SP 2.* Summers 1917 and 1918 Rodman and Instrumentman at Camp Logan, Tex. Summer 1919 Instrumentman, Humble Oil Co., at Bay Town, Tex. Summer 1920 Paving Inspector, City of Houston, Tex. July 1921 to Jan. 1922 Office Engr. and Estimator for G. C. Street, Contr. *TT 0.5: P 0.5: RC 0.5.* Jan. 1922 to date with City of Houston, until July 1923 as Inspector and Asst. Engr. on bridge construction, then Asst. Engr. on sewer construction (5 months), permanent paving (1 year) and (since Jan. 1925) in charge of permanent paving design, profiles, field work and supervision, estimates and investigations on petitions, etc., being Office Engr. Dec. 1924 to March 1925 also on detail and structural design on reinforced concrete buildings for T. B. Hubbard. *TT 5.5: P 5.5: RC 5.5: D 1.6. TT 8: SP 2: P 6: RC 6: D 1.6.* Refers to G. R. Bingham, J. I. Cornelison, J. B. Dannenbaum, J. G. McKenzie, J. C. McVea, W. H. Mead, L. B. Lyon, Jr.

1136

(11) **STROMSOE, DOUGLAS ALBERT**, Jun., 1604 Fair Oaks Ave., South Pasadena, Cal. (Elected Aug. 4, 1924.) (Age 28. Born Denver, Colo.) 1923 B. S. in C. E., Cal. Inst. Tech. *TT 2: SP 2.* Sept. 1919 to April 1920 Chainman and Rodman, Southern California Edison Co., Kernville, Cal. *TT 0.6: SP 0.6.* April to Sept. 1920 Rodman and Instrumentman, Union Oil Co., at San Luis Obispo and Taft, Cal. *TT 0.4: SP 0.4.* Summer 1921 Instrumentman, and Summer 1922 Draftsman and Estimator, Road Dept., Los Angeles County. June 1923 to May 1924 Draftsman, Estimator and Designer on record maps, sewer and road profiles, structures, J. F. Collins Corporation, Long Beach, Cal. *TT 0.9: SP 0.8: P 0.6: D 0.3.* May to June 1924 survey and map of tract at Lake Elsinore, Cal. *TT 0.1: P 0.1: RC 0.1.* July 1924 to April 1925 Draftsman, Estimator and Designer on sewerage system, City of Long Beach. *TT 0.8: SP 0.4: P 0.4: D 0.2.* May 1925 to July 1926 Engr. for Rancho La Sierra, Inc. (small farm project), Arlington, Cal., involving design, estimates, surveys, drafting and special studies. *TT 1.3: P 1.3: RC 1.3: D 0.7.* Aug. 1926 to date Sales Engr. in charge of Riveted Steel Pipe Dept., Baker Iron Works, Los Angeles. *TT 0.9: P 0.9: RC 0.9: D 0.2. TT 7: SP 3.7: P 3.3: RC 2.3: D 1.4.* Refers to F. J. Converse, A. L. Ferver, G. B. Heywood, F. W. Karge, R. R. Martel, W. W. Michael, S. B. Morris, H. Paterson, K. Sanborn, F. Thomas, L. J. Waller, A. J. Werner, L. G. Williams.

1137

(7) **TAYLOR, FREDERIC CHARLES**, Jun., Care, Hoad, Decker, Shoecraft & Drury, Ann Arbor, Mich. (Elected Feb. 25, 1924.) (Age 31. Born New Baltimore, Mich.) Registered Civ. Engr., State of Michigan. 1923 B. S. in C. E., Univ. of Mich. *TT 2: SP 2.* May 1916 to March 1917 tracing and apprenticeship in tool drafting, Tool Designing Dept., Packard Motor Co., Detroit, Mich. *TT 0.8: SP 0.8.* March to Nov. 1917 field and office work (preliminary engineering), April to Sept. 1919, summers 1921 and 1922 drainage surveys, map and profiles, and Sept. 1923 to March 1924 Res. Engr. on highway construction, all for St. Clair County Road Comm., Fort Huron, Mich. *TT 1.5: SP 1.1: P 0.4: RC 0.4.* March 1924 to date with Hoad, Decker, Shoecraft & Drury, Cons. Engrs., Ann Arbor, Mich., on

sanitary engineering, office and field, preliminary investigations, design, specifications on sewerage, drainage, sewage disposal, water-works, purification plants, being Asst. in charge of Dept. of Drafting and Design. *TT 3.3: P 3.3: RC 2: D 1. TT 7.6: SP 3.9: P 3.7: RC 2.4: D 1.* Refers to R. A. Anderson, A. J. Decker, W. R. Drury, W. C. Hoad, G. D. Kennedy, R. L. McNamee, E. C. Shoecraft.

1138

(15) **TOLER, GEORGE GATLIN**, Jun., Box 506, Poteau, Okla. (Elected Feb. 25, 1924.) (Age 26. Born Pawnee, Okla.) 1923 B. S. in C. E., Okla. Agri. and Mech. Coll. *TT 2: SP 2.* May 1921 to May 1923 (vacations and spare time while student) Draftsman and Chainman in County Engr.'s office, Pawnee County, and (after May 1922) Draftsman and Instrumentman on city pavement and sanitary sewers, Pawnee, Okla. May 1923 to date with Oklahoma State Highway Dept., until July 1923 as Draftsman, then Instrumentman and since Dec. 1924 Res. Engr. in responsible charge of construction of Federal and State Aid projects, grading, culverts, bridges and concrete pavement. *TT 4.1: SP 1.6: P 2.5: RC 2.5. TT 6.1: SP 3.6: P 2.5: RC 2.5.* Refers to W. C. Burnham, F. Herrmann, D. H. Jones, R. V. Lindsey, J. M. Page, E. N. Todd, R. G. Tyler.

1139

(9) **TROSPER, COURTNEY SCOTT**, Jun., Box 105, Corbin, Ky. (Elected June 7, 1926.) (Age 30. Born Gray, Ky.) Nov. 1917 to Oct. 1919 Rodman, Masonry Inspector and Acting Instrumentman, Louisville & Nashville R. R. Co. *TT 1.9: SP 1.9.* Oct. 1919 to April 1920 with Lincoln Memorial Univ., Hurrigate, Tenn., as Instructor in Surveying and Drafting, Asst. to Supt. of Constr. in charge building construction and reservoir for school water supply, made surveys. *TT 0.5: P 0.5.* April to Nov. 1920 with Dept. of Public Roads, Frankfort, Ky., as Draftsman on highway plans, estimates, etc., 1 month as Instrumentman. *TT 0.6: SP 0.1: P 0.5.* Nov. 1920 to Jan. 1921 Transitman with H. E. Fox, Cons. Engr., Big Stone Gap, Va., on mine surveys. *TT 0.2: SP 0.2.* Jan. 1921 to July 1922 with Appalachian Power Co., Bluefield, W. Va., as Engr.-Draftsman, map work from field notes, computations, and Jun. Engr. in charge of steel-tower transmission-line surveys. *TT 1.5: P 1.5: RC 1.5.* July 1922 to Dec. 1923 Designer, Missouri Highway Comm., Jefferson City, Mo., had charge of plans, Project Engr. on highway and bridge construction. *TT 1.4: P 1.4: RC 0.8: D 0.6.* Dec. 1923 to April 1924 ill. April to Dec. 1924 Project Engr. in charge of concrete and asphalt highway construction, Indiana Highway Comm. *TT 0.7: P 0.7: RC 0.7.* Dec. 1924 to Feb. 1925 private work; building plans, surveys, etc. *TT 0.2: SP 0.2.* Feb. to May 1925 Draftsman, Alabama Highway Comm., Montgomery, Ala., on completion of highway plans, estimates, maps, etc. *TT 0.2: SP 0.2.* June 1925 to Jan. 1926 Project Engr., Indiana Highway Comm., Indianapolis, Ind., in charge of highway work. *TT 0.5: P 0.5: RC 0.5.* Jan. 1926 to date City Engr., Corbin, Ky., in charge of streets, sewers, etc. *TT 1.5: P 1.5: RC 1.5: P 0.5. TT 9.2: SP 2.6: P 6.6: RC 5: D 1.1.* Refers to C. C. Clement, J. T. Hallett, F. Kellam, G. K. McCormick, W. J. Titus.

1140

(3) **TROXELL, HAROLD COBLE**, Jun., 704 Journal Bldg., Albany, N. Y. (Elected Oct. 2, 1922.) (Age 31. Born Abilene, Kans.) 1921 A. B., Stanford Univ. *TT 2: SP 2.* April 1921 to date with U. S. Geological Survey, Water Resources Branch, until Sept. 1925 as Jun. Hydr. Engr. on collection of hydraulic and meteorological data in Los Angeles County, Cal., and remainder of time Asst. Hydr. Engr. reviewing and assembling manuscript for water supply papers at Washington, D. C., and (since March 1927) on computation of stream flow data in district office at Albany, N. Y. *TT 6.3: P 6.3: RC 2. TT 8.3: SP 2: P 6.3: RC 2.* Refers to H. Conkling, N. C. Grover, A. W. Harrington, J. C. Hoyt, R. H. Jamison, H. D. McGlashan.

1141

(1) **von ABO, CECIL VIVIAN**, Jun., South African Rys. and Harbors, Johannesburg, South Africa. (Elected May 28, 1923.) (Age 31. Born Kronnstad, Orange Free State.) 1913 B. A., Univ. of Cape of Good Hope. 1917 B. Sc. in Civ. Eng., 1918 and 1919 M. A. in Mathematics, Univ. of Capetown: 1922 Ph. D. in Civ. Eng., McGill Univ. *TT 2: SP 2.* Feb.-Aug. 1918 Lecturer in graphics and mechanical laboratory, Univ. of Capetown. May to Oct. 1920 Field Engr., C. D. Howe & Co., Cons. Engrs., Port Arthur, Ont., 3 months on reconstruction of grain elevator, Port Colborne Govt., then in office at Port Arthur on design of pulp and paper mills. *TT 0.4: P 0.4: D 0.2.* Feb. 1920 to Oct. 1922 graduate student in Civ. Eng., at McGill Univ. (2 years) and Cornell Univ. (1 year). *TT 2.3: P 2.3.* March 1923-June 1925 Lecturer in mathematics and mechanical engineering, Cape Technical Coll., Capetown, South Africa. *TT 2.2: SP 2.2.* July 1925 to March 1927 Asst. Engr., and March 1927 to date Research Engr., Dept. of Chf. Engr., South African Rys. and Harbors, research,

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on track, track stresses, split rails, etc. *TT 1.7: P 1.7: RC 1.7. TT 8.6: SP 4.2: P 4.4: RC 1.7: D 0.2.* Refers to F. A. Barnes, P. R. R. Blisschop, H. S. Jacoby, A. Levy, H. M. MacKay, W. G. Sutton.

1142

(8) **WELDEN, NEIL**, Jun., 1400 East Fifty-Third St., Chicago, Ill. (Elected Oct. 12, 1925.) (Age 31. Born Iowa Falls, Iowa.) 1925 B. S. C. E., Iowa State Coll. *TT 2: SP 2.* Jan. to April 1917 Instrumentman and Engr., Mainland Cedar Co., Port Neville, B. C., on location and construction of logging railroad. *TT 0.3: SP 0.1: P 0.2: RC 0.2.* May 1917 to Sept. 1919 Corporal, 2d Engrs., U. S. Army being Specialist in reconnaissance and mapping. *TT 2.3: SP 2.3.* Nov. 1919 to Dec. 1921 Instrumentman and in charge of party, Porteous & Co., Seattle, Wash., on timber cruising, mapping and logging railroad location. *TT 2: SP 1.8: P 0.2: RC 0.2.* June to July 1922 Contr., grading athletic field, Ellsworth Coll., Iowa Falls, Iowa. *TT 0.1: SP 0.1.* Aug. to Dec. 1922 Asst., Welden Constr. Co., Iowa Falls, on construction of concrete arch bridge. *TT 0.3: P 0.3: RC 0.3.* July 1925 to May 1926 Detailer and Checker of structural steel for buildings, American Bridge Co., Gary, Ind. *TT 0.9: SP 0.2: P 0.7.* June 1926 to date Designer and Draftsman, Bridge Dept., Chicago. Rock Island & Pacific Ry., Chicago, Ill., designing, detailing and checking repairs and new bridges and rating bridges. *TT 0.9: P 0.9: RC 0.6. TT 8.8: SP 6.5: P 2.3: RC 1.3.* Refers to T. R. Agg, A. A. Clausen, F. W. Dencer, F. Kerekes, A. Marston, E. Welden.

1143

(4) **WINKLER, EDWARD RUDOLPH, Jr.**, Jun., 97 Glen St., Chambersburg, Pa. (Elected Feb. 25, 1924.) (Age 27. Born Camden, N. J.) 1923 B. S. in C. E., Univ. of Pa. *TT 2: SP 2.* July to Oct. 1920 Transitman Dept. of Highways, Philadelphia, drafting and cost accounting, etc. June 1923 to Jan. 1924 Rodman, Pennsylvania R. R., drafting for track layouts, inspecting construction, etc. *TT 0.6: SP 0.6.* June to Oct. 1922 Asst. Inspector, on grading, drainage system and concrete for 12-mile road, and Jan. to April 1924 Draftsman on plans and estimates for bids, etc., Pennsylvania State Highway Dept. *TT 0.3: SP 0.3.* April 1924 to Jan. 1925 Asst. Engr., Tipton Water Co., inspection and engineering on masonry and concrete dams, pumping station, reservoir, cast iron and reinforced concrete pipe lines. *TT 0.7: P 0.7: RC 0.7.* Jan. 1925 to date Asst. Engr., Water Companies, being Inspector, Eng. Dept., Pennsylvania R. R., on design and in charge of construction of cast-iron pipe lines, masonry dam, pumping station, and standpipe for improved water facilities, estimating, etc. *TT 2.5: P 2.5: RC 1.4: D 1.2. TT 6.1: SP 2.8: P 3.3: RC 2.1: D 1.2.* Refers to H. C. Berry, E. W. Clark, C. L. Eckel, C. Haydock, J. W. Ledoux, J. A. Russell, M. deK. Smith, Jr.

1144

(3) **WRIGHT, CHILTON AUSTIN**, Jun., School of Civ. Eng., Cornell Univ., Ithaca, N. Y. (Elected April 3, 1922.) (Age 28. Born Washington, D. C.) 1919 C. E., 1920 M. C. E., and 1927 Ph.D. in Eng., Cornell Univ. *TT 2: SP 2.* July to Sept. 1917 Rodman on sewer surveys, Camp Dix, N. J. May to Sept. 1918 Rodman and Transitman at Camp Eustis, Va. March 1919 to Feb. 1920 graduate work at Cornell Univ. *TT 1: P 1.* March 1920 to Oct. 1921 Asst. Engr., New York Water Power Investigation Comm., operating planetable in topographic surveying of dam sites; 3 months Asst. in preparing rainfall map of New York State. *TT 1.7: SP 1.4: P 0.3: RC 0.3.* Oct. 1921 to Aug. 1922 Asst. Engr., New York Water Power Investigation, on preliminary design of hydro-electric plants, study of stream flow, regulation and operation of plants. *TT 0.8: SP 0.8.* Sept. to Nov. 1922 Asst. Engr., Emergency, New York City Board of Water Supply, on construction, office work, computations, analyzing cost data, progress reports of steel pipe siphons. *TT 0.2: SP 0.2.* Jan. 1923 to June 1924 with Sanderson & Porter, New York City, until May 1923 as Chf. of Party on topographical survey of hydro-electric development, responsible for execution of work; then Hydr. Draftsman, Asst. in hydro-electric design, studies, reports and estimates. *TT 1.5: SP 0.3: P 1.2: RC 0.7.* Sept. 1924 to date Instructor, Cornell School of Civ. Eng., Cornell Univ., teaching hydraulics, materials laboratory, concrete design, one term in charge of materials laboratory course, also graduate student. *TT 2.8: P 2.8: RC 1. TT 10: SP 4.7: P 5.3: RC 2.* Refers to F. A. Barnes, J. P. Hogan, E. W. Maloney, F. Mason, F. W. Scheldenhelm, E. W. Schoder, C. E. Sudler.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.